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WITH REFERENCE TO
DIET IN DISEASE

ALIDA FRANCES PATTEE

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PRACTICAL DIETETICS WITH REFERENCE TO DIET AND DISEASE

PRACTICAL

DIETICS

WITH REFERENCE TO
DIET IN DISEASE

BY

ALIDA FRANCES PATTEE

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THIRD EDITION

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To the Trained Nurse:
Whose daily life is a
blessing to humanity.

PREFACE TO THE THIRD EDITION

The very gratifying demand for this little work has necessitated the preparation of a third edition. Advantage has been taken of this opportunity to very carefully revise the text and eliminate all errors, typographical and otherwise.

Even the short time that has elapsed since the second edition was published has enabled me to recognize what has been gained for "Practical Dietetics" by the valuable co-operation of those to whom I have acknowledged my indebtedness in the Preface to the Second Edition, and to whom I renew my thanks.

A. F. P.

New York, February, 1905.

PREFACE TO THE SECOND EDITION

The very cordial reception of the first edition of Practical Dietetics has encouraged a second presentation.

In the preparation of the second issue the original matter has been thoroughly revised, and important additions made.

For valuable material I am indebted to the following physicians, hospitals and publishers, and gratefully acknowledge their assistance and kind permission accorded by them to quote their several diets.

Dr. W. Gilman Thompson, Professor of Medicine in the Cornell University Medical College in New York City and visiting physician to the Presbyterian and Bellevue Hospitals:

Dr. Max Einhorn, Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital, visiting physician to the German Dispensary:

Dr. Henry Koplik, attending physician Mount Sinai Hospital, ex-president of the American Pædiatric Society:

Dr. L. Emmett Holt, Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), attending physician at the Babies' Hospital and Foundling Hospital, New York:

Dr. Louis Starr, Consulting Pædiatrist to the Maternity Hospital, Philadelphia; late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania:

Dr. Frederick C. Shattuck, Professor of Clinical Medicine in Harvard University, visiting physician Massachusetts General Hospital:

Dr. Elbridge G. Cutler, Instructor in Theory and Practice at Harvard Medical School, visiting physician Massachusetts General Hospital:

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D. Appleton & Co., Blakiston & Co., William Wood & Co., and the publisher of the Dietetic and Hygienic Gazette:

And sincere thanks are due Mrs. Ellen H. Richards (Instructor at the Massachusetts Institute of Technology) for aid and information, also for permission to quote from the Rumford Kitchen Leaflets.

A. F. P.

New York, July, 1904.

PREFACE TO THE FIRST EDITION

As instructor of dietetics at various hospitals I have constantly felt the need of a simple manual and textbook for the use of the nurse in the classroom.

None could be found which fulfilled the requirements as to simplicity, brevity, and exactness, with reference to dietetic treatment in disease.

This same need has been expressed by mothers and nurses outside of the hospital.

In the following pages I have endeavored to meet this need by giving the result of knowledge gained during the past eight years of practical classwork experience in hospitals of different cities.

The preparation of food is a science as well as an art, the chemistry of which is as precise as the chemistry of the laboratory. When we are willing to be as exact and careful in this work as we are in chemical experiments, our success will become a certainty. No other technical art can, with so little practical knowledge, go as far in simplifying that which is otherwise complicated and laborious, or do more toward accomplishing that which is a chief result of all science—adding to the comfort and happiness of the human race.

ALIDA FRANCES PATTEE.

New York, July, 1903.

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PRACTICAL DIETETICS

PRACTICAL DIETETICS

FOOD: ITS OBJECT

Maintenance of Life and Energy

There are few subjects deserving of more careful consideration and study than that of food; its composition, preparation, and effect upon the human system; together with the process of its conversion into complex animal tissue, brain and muscle.

The true science of food should be thoroughly studied, that we may understand what properties enter into it; what elements the system demands in order to repair and to rebuild; by what means the necessary substances are best supplied, and how to prepare them so that the body may maintain its efficiency, so that in case of illness, the least possible demands upon the digestive and assimilating functions may be made.

"Hygiene of the stomach is also hygiene of the mind."

FOOD VALUES

Apart from the labor of every-day life in which brain and muscle engage, an immense amount of work is performed in the mere act of keeping alive. Nowhere in nature is work performed without proportionate waste, or wear and tear of the machine which does the work. This assertion is as true of the human body as of the locomotive, and just as the machine—whatever it may be—requires to be supplied with the conditions necessary for the production of force, so the living body similarly demands a supply of material from which its energy—the power of doing the work—can be taken. As the locomotive obtains the necessary conditions from the fuel and water (and air) which it consumes, so the living body derives its energy from the food upon which it subsists. Food, therefore, is anything taken from the outside world from which the human body derives the substances required for the repair of the waste which the continual work of life entails. In the young, food serves another purpose—it provides material for growth, and it also affords substance from which the supply of force is obtained. In the adult, while food supplies actual loss of substance, it is specially devoted to maintaining the equilibrium between work and repair which constitutes health.

The following is a brief account of the composition of food and its relation to the body. The human body contains many chemical elements in greater or less quantity.

Nitrogen, carbon, hydrogen, and oxygen are the four present in largest proportion; sulphur, phosphorus, chlorin, iodine, potassium, sodium, calcium, magnesium, iron, also have important offices to perform.

In order that the body may be repaired and nourished, these elements must be represented in the food of man.

Foods are classified as follows in regard to their chemical composition:

Organic	NITROGENOUS (protein.)	*Proteids*, e.g., casein, myosin, gluten, legumin. *Albuminoids*, e.g., gelatin.
	NON-NITROGENOUS	*Carbohydrates*, e.g., sugar, starch. *Fats*, e.g., olive-oil, butter.
Inorganic		*Mineral matter*, e.g., sodium, potassium, lime, phosphorus, chlorin. *Water*.

—*Hutchison*.

One may classify the nutritive constituents of food, according to their functions in the body, as follows:

Tissue Formers.	*Work and Heat Producers.*
Proteids.	Proteids.
Mineral matters.	Albuminoids.
Water.	Carbohydrates.
	Fats.
	Mineral matters.
	Water

—*Hutchison.*

A simple and convenient classification is as follows:

Classes of Foods		*Use in the Body.*	*Composed Chemically of Following Elements.*
1. Water.		Nature's greatest solvent.	Hydrogen—Oxygen. H_2O.
2. Salts.		Necessary for the perfect building of the body, for holding insoluble substances in solution, and for maintaining the requisite osmotic tension of fluids.	
3. Fats.		Work and fuel foods.	Carbon—Hydrogen. Oxygen.
4. Carbohydrates.	Sugar. — Fruit. ... Starch............	Work and fuel foods.	Carbon—Hydrogen. Oxygen.
5. Protein or Proteids or Nitrogenous.	Meat. Fish.. — Albumin. Fibrin.... Myosin.. Eggs. — Albumin. Peas. Beans. — Legumin. Milk. — Casein... Grains.— Gluten...	Muscle forming. Tissue repairing.	*Nitrogen*—Carbon. Hydrogen—Oxygen.

For the proper support of the human system, a combination of nitrogenous and non-nitrogenous foods is essential, with water to dissolve them and oxygen to burn them. Although air is not classified as a food it is essential to effect the chemical changes needful for its assimilation. "About two thousand cubic feet of air need to pass through the lungs of an adult daily in order to furnish oxygen in sufficient quantity. If there is lack in this most important food-stuff (and nothing else can take its place), starvation as truly results as if other food were withheld, for the changes required for nutrition cannot take place, and furthermore incomplete decomposition occurs, which may result in more or less poisonous products.

Fresh air—air with its quota of oxygen—is, then, a prime requirement in nutrition."—Ellen H. Richards.

WATER

Water undergoes no change in the body, yet the consideration of it is of vital importance. Solution is an essential part of digestion. Water bathes the tissues and washes away our waste and excrementitious matter. As it does not itself undergo any chemical alteration it is not susceptible of liberating force, consequently is not a force-producing agent, but contributes to chemical changes by supplying a necessary condition for its occurrence in other bodies.

Dr. Gilman Thompson summarizes the uses of water in the body as follows:

1. It enters into the chemical combination of the tissues.
2. It forms the chief ingredient of all the fluids of the body and maintains their proper degree of dilution.
3. By moistening various surfaces of the body, such as the mucous and serous membranes, it prevents friction and the uncomfortable symptoms which might result from their drying.
4. It furnishes in the blood and lymph a fluid medium by which food may be taken to remote parts of the body and the waste material removed, thus promoting rapid tissue changes.
5. It serves as a distributor of body heat.

6. It regulates the body temperature by the physical processes of absorption and evaporation.

Considering that a human body weighing one hundred and fifty pounds is one hundred and eight pounds water, or about two-thirds liquid, we can readily see the importance of supplying this amount. And a large quantity is needed, not only the amount obtained from our food, but two and a half to four pints should be taken daily in beverages. This need must not be overlooked for the patient, who should be supplied with ample liquid nourishment of a suitable temperature, and when a patient is too young, too ill, or too delirious to ask, water should be regularly and frequently given.

The physician and nurse should see that water is offered the thirsty in all cases. Nature demands it, though the patient makes no request; the amount to depend upon the character of the diet and the disease.

A water of known purity should be used for drinking purposes; when this cannot be procured water can be purified by boiling ten minutes, pouring it into sterile bottles, corking with absorbent cotton, until cool and ready to serve.

SALT

The mineral ingredients of the body are essential to the maintenance of life, to give the body form and stability, and to enable it to perform numerous special functions; doubtless they take large part, by so-called catalytic action, in the more recondite chemistry of cells and fluids. They are obtained in abundance, even in excess, in foods that are ordinarily eaten. In health, sodium-chloride (common salt) is the only salt that need be added to foods.

FATS

Sources of Body Fat.—Twenty per cent. of the normal weight of man is fat. It is, however, only in small part derived from fatty food. Its chief source is carbonaceous foods.

Uses of Body Fat and Fatty Foods.—Protein produces a part of it. Most of the fat that is taken is rapidly oxidized and supplies much of the heat generated by the living body. Because it is so rapidly utilized for heat production it saves the living tissues in part from waste. It also contributes a little to the formation of tissue. Tissue waste is most rapid under a diet of protein. For these reasons a moderate ingestion of fatty foods makes it unnecessary to eat so large a quantity of protein, as would otherwise be needed to furnish energy, and contribute to the growth and repair of tissues.

Fats, as a rule, are not tolerated by patients acutely ill, and their use should be limited to such forms as are finely divided, as in milk or yolk of egg, and it is sometimes even necessary to reduce the fat in milk by skimming off the cream, or the yolks of eggs may be prohibited as thirty per cent. of the yolk is fat. All fats, except limited quantities of butter and cream, should be forbidden in acute diseases of the stomach, intestines and liver, and in most of the chronic affections. Their uses should be limited also in the presence of gall stones.

Fatty foods should be prescribed for children with rickets and for all who have diabetes. In the latter disease they partly replace the carbohydrates which cannot be used. Fat may be prescribed with benefit in chronic wasting disease, such as tuberculosis, and during convalescence from severe acute disease. The most agreeable and digestible forms should be given. At first a small portion only should be taken, and the quantity increased in proportion to a patient's willingness to accept it. In a general way fats and oils are laxative, and consequently useful in case of constipation and equally harmful where there is a tendency to diarrhœa.

Digestion.—Fat is not affected by salivary digestion and but slightly by gastric digestion.

It is only when gastric digestion is over and fat comes in contact with the bile and the pancreatic secretion that any change is effected in it.

The change is not molecular like the hydration of carbohydrates and proteids; but is, merely an emulsification, that is, a division into minute particles, by the action of bile and pancreatic secretions.

These fine particles are small enough to enter the mouth of the lacteals in the intestinal villi, which may be said to "eat" the fat globules. From thence the emulsified fat passes on to the lymphatics, entering the blood by the thoracic duct.

As the tissue-fat is steadily burned in the body to maintain the animal heat, the diet-fat constantly replaces the loss, bulk for bulk; and when more fat is eaten than is needed for this substitution the surplus is stored up in the tissues. (Rubner.)

SUGAR (CARBOHYDRATES)

Sugar, one of the sources of carbohydrates, furnishes heat and energy and stores fat.

Common sugar and maltose are very soluble and easily absorbed, and for this reason seem an extremely desirable form of nourishment for a patient.

The sugars of our food are soluble to begin with, and some of them are absorbed into the blood directly without undergoing any change (glucose), while others—ordinary table sugar (cane sugar), for example—undergo a conversion before or during absorption into glucose (grape sugar), which is the particular variety of sugar found in the blood.

Fruits.—Fruits are not only refreshing, but afford variety in the diet and supply water, which they contain in large proportions, to the system. Most fruits contain eighty-five to ninety per cent. of water, some sugar, and the citrates and tartrates of potassium.

Other fruits, such as grapes and bananas, contain sugar in varying proportions, up to fifteen per cent., and their value as food is considerable. The banana contains starch, which turns to sugar as the fruit ripens. Dried fruit, such as dates and figs, contains sixty per cent. sugar and six per cent. protein.

Though we take foods into our stomach in solid form it is necessary that they become soluble in order to be assimilated. *The classes of foods which we have thus far considered* are readily absorbed. *Water* and certain of the *salts*, *sugars* and *fats*, which being soluble (or in the case of fats finely emulsifiable), are able to enter the blood without undergoing any marked molecular change.

In the remaining classes—*starch* and *protein*—we have foods which must pass through a series of transformations before becoming soluble and absorbable.

STARCH (CARBOHYDRATES)

Starchy foods form a large part of the ordinary diet of man; they are the chief sources of the carbohydrates, and furnish heat and energy and store fat. The starches are of vegetable origin and are found in nature especially in seeds, grain, nuts, in certain roots and tubers, and in some of the fruits. Flour and meal made from vegetable products consist chiefly of starch, and are prepared from cereal grains, and certain roots and tubers. Meal, too, is made from certain nuts, as the chestnut; also from the banana.

In its pure state, *i.e.*, when isolated from protein matter, cellulose, gum, etc., starch is a shining white powder having a distinctive quality to the touch. Under the microscope it is found to consist of granules, which are insoluble in cold water. When heated to a high temperature these granules swell up and undergo a certain amount of transformation into soluble starch and dextrin. Boiling the starch in water has the same results, while the action of the group of ferments known as diastases is to transform the insoluble starch into a progressive series of substances, the terminal product of which is grape sugar. The natural acid of the gastric juice is also able to convert starch into sugar.

Before primeval man had learned to cook, he subsisted largely on raw grain, seeds and roots containing starch. The jaws and teeth were highly developed, and mastication and insalivation were very important functions in food absorption. The mouth was then a veritable mill for grinding and comminuting these substances, and in a certain sense the action of the saliva with its diastase took the place of cooking, the raw starch being changed to soluble starch, dextrin and certain forms of sugar.

At the present day, however, the digestion of starch begins in the kitchen, for the greater portion of the starchy food of the diet is cooked when served, and is thereby rendered so soft and succulent that mastication and insalivation are much less needed for this class of foods. It would, however, be a great mistake to neglect to chew these foods, for due deliberation in eating is of great advantage.

Breadcrust, toast, etc., which are so much in demand in delicate digestion, are especially in need of thorough mastication on account of their fineness of texture and lack of water.

Starch alone is insufficient for the dietetic requirements of man, since it contains no nitrogen and cannot serve for the purposes of growth and repair. Its chief use is in supplying energy of work and combustion. Both protein and fat can take the place of starch in dietaries; and certain forms of protein are believed to contain carbohydrate groups, so that as food they supply starch at the same time.

Starch, however, is of great practical use, for it is much more digestible than fat, and when combined with protein it appears to aid the digestibility of the latter. The starch which escapes digestion ferments in the intestine, forming certain acids; and this acid-fermentation is known to check the putrefaction of the undigested protein and vice versa. This is the true reason of the utility of a mixed diet, and not the supposed needs of the organism.

Digestion of Starchy Foods.—Let us suppose that by cooking, toasting, etc., the starch of the food is partly transformed to more soluble products, which, however, are as yet far from the absorbable stage. The act of mastication mechanically comminutes the food, and the salivary diastase converts the partly soluble starch to simple and more soluble forms; and if left to itself mouth-digestion should be sufficient for the complete transformation of starchy food.

But as the contents of the mouth are quickly swallowed, buccal digestion is more or less hindered, because the salivary diastase acts habitually in an alkaline medium, while the gastric juice is acid.

Nevertheless this interruption is more apparent than real; first, because a considerable proportion of the swallowed food, which lodges in the fundus of the stomach, does not come under the influence of the gastric juice for a considerable period during which salivary digestion proceeds unchecked; and second, because the acid of the gastric juice is able, by catalytic action, to transform a certain amount of the carbohydrates into more soluble forms. Again the pepsin of the gastric juice may often render service under certain circumstances, by digesting the glutinous cement which invests the granules in starchy food.

Hence it is readily apparent that the long maintained belief in the arrest of starch-digestion in the stomach is untenable. When the more or less transformed starch enters the intestine, it is quickly converted to its end-products (those fitted for absorption) by the action of two ferments, viz., the pancreatic diastase and the invertin of the intestinal juice. These terminal products, which consist chiefly of dextrose—also known as glucose or grape sugar—are readily absorbable by the blood and utilizable.

Ordinary table sugar (cane sugar), which represents an imperfect stage of digestion, may when swallowed in great excess escape transformation into grape sugar. Under these circumstances it is absorbed, but not utilized, being rapidly eliminated, unchanged, by the kidneys.

PROTEIN (Nitrogenous Food)

Protein has both animal and vegetable origin. It forms, however, so large a percentage of certain edible portions of animal substances, and so small a proportion of the usual vegetable foods that the former furnishes us our chief supply. Meat, fish, eggs, peas, beans, all grains (gluten flour) and milk are the most important of the nitrogenous foods:

> 1 pound sirloin steak contains 60 grammes protein.
> 1 pound eggs contains 60 grammes protein.
> 1 pound dry peas contains 112 grammes protein.
> 1 pound peanut butter contains 133 grammes protein.
> —Ellen H. Richards.

Uses of Protein in the Body.—These are to repair the waste of those tissues which contain nitrogen, that is, the muscles, nerves, brain, etc., and to reconstitute the secretions and fluids of the body and the digestive juices, to control, stimulate and support the vital processes of functional activity and nutrition, and to contribute to the development of muscular and nervous energy, by splitting up into nitrogenous and non-nitrogenous elements, by the production of heat and under certain conditions by the formation of fat.

Since nitrogenous foods are imperatively needed for the use of the body and for repair of tissue, they should not be omitted from the diet after wasting disease. When digestion fails almost completely they may be given in a peptonized form.

Nitrogenous foods are complex in composition and decompose readily, and in their preparation more care is required than with any other kinds of food. To avoid decomposition they should always be fresh, and to prevent losing the albumin by coagulation when the liquid food is strained, they should not be heated above the temperature of 160 to 180 degrees Fahrenheit.

Digestion of Protein.—Our knowledge of the subject of digestion, and especially of the digestion of protein foods, has been completely revolutionized within the past decade by the researches of the distinguished scientist Pawlow. The results attained are so numerous and varied that only the more significant can be mentioned here.

The first important teaching, in departing from the views hitherto accepted, is that the contact of the swallowed food is without significance in provoking a flow of gastric juice (with exceptions to be mentioned later). The secretion of the stomach, so important to the digestion of protein food, is chiefly of psychical origin, *i.e.*, it is due to memories, associations, to the sight, smell and taste of food. The sensation of appetite, the desire for eating with the pleasure obtained from eating, are derived from the secretion of gastric juice. If these psychical factors have determined a flow of gastric juice, the individual is hungry, desirous of eating; and conversely whenever appetite is present we may feel sure that the stomach is secreting its digestive fluid. There are, however, other factors which contribute to the production of gastric juice; one of those is the act of mastication, which appears to regulate the amount of juice secreted. The longer we chew the greater the amount of secretion; while, conversely, the man who, with good appetite, bolts his food, will have his secretion of gastric juice curtailed. Given the presence of the psychical stimuli of gastric juice—the sight, smell, or taste of agreeable food—mastication is a secondary factor of great importance in maintaining this flow. We have already mentioned the influence of the taste of food on the secretion of the stomach, but we should also include here the stimulating influence of substances not in themselves foods, which, however, act like sapid foods in this respect. In this class belong bitters, condiments and the like. When the food is swallowed, its mere mechanical contact with the stomach exerts little or no influence on the secretion of gastric juice. But a few—a very few—substances, seem to promote a reflex secretion of the latter fluid; these comprise water and watery substances, extract of meat, gelatin, dextrin, and peptone. Why these particular articles should accelerate the ordinary flow of gastric juice is obscure; although all of them represent certain constant constituents of ordinary diet, or certain stages in the digestion of particular food products. Time does not permit a theoretic consideration of the subject, but we cannot refrain from calling attention to the important part played by most of these articles in the dietary of both the sick and well. The extreme use of toasts (dextrin), broths, beef tea, gelatine jellies, and peptones by the sick, and of soup as the prologue of dinner in the well must surely bear some relation to the "stomachic" properties of this class of substances, as shown by Pawlow's experiments.

Aside from this chemical influence exerted by a few classes of consumed foods upon the flow of gastric juice, Pawlow's teachings comprise another group of facts, to wit: that the particular composition of the consumed food exerts a direct influence upon the composition of the gastric juice, without reference to its quantity. To put the matter briefly, the gastric juice is essentially an "adaptation-juice." If much pepsin is needed—as in an almost exclusively protein diet—pepsin is forthcoming; while a diet rich in starch or fat is attended by the secretion of a juice relatively poor in pepsin.

With reference to the chemistry of protein digestion, we know that the gastric juice is in itself capable of transforming protein to its final absorbable substances, if time were available. But as the stomach tends to discharge its contents into the intestine, and as gastric juice is quickly and thoroughly deprived of its physiological action by the bile and pancreatic secretion, stomach digestion without certain special provisions would be a transitory and incomplete process. All the contents of the stomach would quickly find their way into the intestine, were it not for the fact that certain substances or agencies cause the pyloric orifice to contract, and thus enable gastric digestion to proceed for a longer or shorter time. These agencies are as follows: 1. The solid particles of the food, *i.e.*, those which have not been reduced to a fine pulp or fluid by mastication and the action of the saliva and gastric juices. 2. A certain degree of acidity of the stomach contents. 3. The presence of fats in considerable amounts, as cream, pork, goose, etc.

This subject of pyloric reflex, as demonstrated by

Pawlow, throws a great deal of light on stomach-digestion. We can understand thereby why a small quantity of indigestible residue, such as is present in most of our staple foods—meats, vegetables, fruits, etc.—is of service in retaining the food within the stomach; why a certain degree of acidity, such as is present early in stomach-digestion (before the acid of the gastric juice has combined with the albumin of the diet) conduces to the same end. We may also see here an explanation of the curdling of milk in the stomach; for if milk did not thus coagulate, it would soon be propagated into the intestine, in which location it would in part escape digestion, and be exposed to putrefaction.

The study of these pyloric reflexes also enables the nurse to understand why a meal of "bolted" food (or of food imperfectly masticated through absence of teeth), or an unusually acid state of the stomach-contents from any cause, or a meal made up largely of fatty food (as cheese, fat of meat, pork, goose, etc.) may set up such a continuous state of pyloric contraction that the stomach remains unemptied for a long period, with a good prospect of relief by vomiting, or of an attack of acute indigestion, biliousness, or diarrhœa. We can partly understand why the excessive use of eggs—so rich in fat—leads to biliousness.

Conversely, the nurse will understand why a diet of "liquids" for a person in relatively good health does not prove equal to his sustenance despite its theoretical food value. These substances tend to pass at once from the stomach into the intestine. They give the stomach nothing to do, and they cannot be fully utilized in the intestine. Protein digestion is completed in the intestine by the action of ferments contained in the pancreatic and intestinal secretions; the soluble and diffusible substances thus formed are taken up by the blood vessels of the intestines, but the manner in which this is accomplished is still obscure.

We have now only to consider the changes which protein matter undergoes in the digestive tract. As the soluble albumin of the diet is essentially absorbable without further change, it is very evident that digestion has a higher aim than mere solution. Albumin of other species of animals is essentially poisonous to mankind, and the alterations induced in these albumins by pepsin and the other ferments is really a decomposition into non-poisonous substances, which are again regenerated to the natural albumin of the blood—in other words, a humanization of the animal albumin. Albumins break up into simpler bodies known as albumoses, these again into still more simple peptones; these again into peptoids, and the latter finally into end products, which consist chiefly of amino-acids. The transformation need not be carried to these end products, for it is probable that all of the derivatives of the food albumin are taken up by the blood, and regenerated in the liver to blood albumin.

NOURISHMENT IN ACUTE DISEASE

FEEDING THE SICK

General Rules

In the treatment of disease there are few questions which have to be considered so often in the daily routine of practice as those which concern the proper support and nourishment of the patient.

A good nurse will never exceed or depart from the physician's instructions; but there are occasions when her possession of accurate, even if limited, knowledge on the subject of chemical and physiological action of food will enable a physician to give more definite directions, which will assist him in the performance of his duties, and will add greatly to the comfort and well being of the patient.

The nurse has a far better opportunity than the physician to judge of all the conditions of the patient's digestion, and his likes and dislikes for different foods, and she should not fail to report them to the physician in charge and understand very positively to what extent she is to be permitted to humor her patient, and substitute one form of food or drink for another.

It may happen from lack of care or indefinite instruction, that the food served will neutralize the effect of the medicine, either by overfeeding, or by irregularities in feeding, which disorder digestion and interfere with the beneficial effect of the medicine.

Often the nurse may conscientiously serve one form of food ordered, offering it in spite of the patient's dislike and nausea with the result of half starving him.

When her instructions have not been specific, or have not provided for emergencies, she should make it a point to have them clearly understood at the next visit of the physician.

To be able to carry out these instructions and offer nourishment intelligently, a thorough practical knowledge of dietetics is necessary, and should be the foundation of every nurse's training. If we wish to succeed in avoiding nausea, vomiting, loss of strength, and even loss of life, we must learn to offer nourishment to the patient in a suitable form, in the quantity and at the times suited to his digestive power, and so adapt his food to his capabilities.

Feeding the Sick.—"In no branch of her work can the nurse be of more service than in her ability to feed a very sick patient properly. There are many details which can only be mastered by extensive sick-room experience and close observation; and much depends upon that tact and discretion, which can never be learned from text-books or lectures. The following suggestions, however, will be found applicable in many instances."—W. Gilman Thompson, M.D.

This subject has been so ably treated by Dr. Thompson (Practical Dietetics, 2d ed.) in his chapter "Administration of Food for the Sick," that permission has been asked, and kindly granted, to use extracts from that chapter; also, by the kindness of Mrs. Ellen H. Richards, quotations have been made from the article "Nourishment in Acute Disease," from the "Rumford Kitchen Leaflets."

Those who are ill are often allowed to drift into critical conditions through not being properly supplied with such nutritive material as their enfeebled powers can digest. Many have perished because those around them did not know how to feed them, and either withheld food altogether, or gave that which was unsuitable, through ignorance. Even when the patient is confined to bed and prevented from taking any kind of voluntary exercise, he still requires heat and energy for the involuntary action of heart, lungs, and the process of living, and their healthy nutrition must be provided for by a supply of plastic material in the food.

Feeding in Acute Disease.—The preparation of food for those who are seriously ill is a matter of vital importance, for the life of the patient often depends either upon the maintenance of strength during the acute period of the disease or on the recovery of power during convalescence. Since acute disease is accompanied by fever, we must consider the effect of feeding in cases where the temperature is febrile in character; also the amount of food, its quality and quantity, together with other conditions affecting its absorption.

In acute disease accompanied by fever, what are the conditions? The body loses weight, urea is increased and carbonic acid and water are excreted in larger amounts than in health. All of this loss is not dangerous if permitted to go on for a few days only, and if the amounts do not exceed certain limits. But to replace these losses we are at a disadvantage as regards the ability of the system to assimilate food. In fevers the appetite is small, or may be completely lost. The saliva, the gastric juices, pancreatic fluid, the bile, are less efficient in action or diminished in amount during high temperature.

The stomach is very sensitive, in part, perhaps, through sympathy with the increased sensitiveness of the nervous system as a whole. If there is much hyperæsthesia of the digestive tract, as in typhoid, in peritonitis, in dysentery or gastro-enteritis, one must be careful not to give too much food, and it should be in a liquid form and partially predigested.

Evidences of Digestion.—Our attention should be devoted not only to what is put into the alimentary canal, but also to what goes out. For instance, if curds of undigested milk are found in the stools of a typhoid patient, the quantity of milk should be diminished, or it should be diluted.

Every careful observer of the sick will agree that many patients are starved, simply from the want of attention to the means which alone make it possible for them to take food. For example, if the patient has a fever with remission and intermission, it is of the first importance to remember that the ability to digest food at these intermissions is greater, and it is then that the most nourishing portions of diet should be given.

It must be borne in mind that, contrary to the prevalent notion, the increase of body heat is not responsible for the wasting of the fever patient. The emaciation is due almost entirely to the inability to receive and digest the food, which in turn arises from the irritable state of the stomach and bowels and the defective secretion of the digestive fluids.

It is the administration of unsuitable food that must be guarded against, and also the giving of nourishment in quantities and at times unsuited to the digestive powers of the patient. All food is changed into liquid in the process of digestion before it can be absorbed into the blood. Liquid food, therefore, is given to the very sick because it can be digested with the smallest amount of labor to the body.

Predigested milk possesses the decided advantage in that it aids the assimilation of the milk without adding to its bulk, as do lime water and other substances.

By diluting milk, stimulants and gruels too much, or making beef tea too weak, the quantity of the fluid is so great that the patient soon tires of swallowing, and stops before enough nourishment has been obtained. One should not give what cannot be digested, nor less than can be assimilated. The attendant must have a constant watch over the condition of the patient's powers of digestion, and it is necessary for her to know how to choose such variety in the diet as to include both what is palatable and what will afford a proper amount of nourishment.

The Appetite.—As the appetite of the sick often requires tempting, the greatest pains should be taken in the preparation of the invalid's food. The lack of desire for food may be due merely to defective cooking, to the serving of meals at inopportune moments, or to the fact that the food selected is not to the patient's liking. A desire for food may exist, but not for the particular food offered, and it is the province of the nurse to differentiate.

Only a small quantity of food should be given at one time so that the appetite may be aroused without the digestive organs being overtaxed. It is much better to serve small quantities often than too much at one time. A tablespoonful of nourishment given every half hour may be retained and digested, and do the patient good, when if a larger amount were given the stomach would reject it.

The majority of weak patients are unable to take food of any solid kind before eleven o'clock in the morning, yet before that time comes they are apt to become exhausted. This would not be likely to occur if a spoonful of some liquid nourishment or stimulant ordered by the physician were given every hour or two, from the early morning up to the time for taking the solid food, which the patient would then probably be able to do by noon.

Punctuality in serving meals should be carefully observed, for an appetite ready at the accustomed hour may fail if the meal is delayed. There is much unconscious habit in regard to eating.

All noise in the preparation of food and smell of cooking should be kept from the sick room. The nurse should never eat her meal or taste the patient's food in his presence, and should always have a cheerful manner and a cleanly, tidy appearance. These things have much effect upon the patient's appetite.

Details in Feeding.—The patient should be saved from thinking as well as from physical exertion, and it is unwise to ask him what he would like to eat, for it is often the unexpected that pleases.

When possible, it is well to bathe the patient's face and hands before offering a meal. The mouth should be rinsed each time after eating with pure water, or diluted borax water (two teaspoonfuls to a tumbler of water). The mouth should be kept thoroughly cleansed, for if the lips are allowed to become parched and sour, the patient will refuse nourishment which he might otherwise take. When a patient cannot rinse his own mouth it must be frequently cleansed by the nurse with a swab of fresh cotton, fastened in a small flexible stick. A tongue scraper made of a whale-bone bent to a loop may be used before serving the food; thus the taste nerves will be uncovered and the appetite improved.

When the patient is first allowed to sit up for half an hour, it is well to utilize this time for giving the principal meal of the day, which is likely to be eaten with more relish at this time, and perhaps better digested in consequence. If the patient is only allowed to partially sit up in bed, the nurse should see that the position is comfortable, and that the food tray does not cramp the arms and legs, and care taken that no crumbs get into the bed.

The effort of sitting up may become fatiguing to the invalid and so destroy his appetite before the meal is half done, or he may not be able to feed himself, or to raise his head. In such cases the difficulty can be obviated by placing the hand beneath the pillow and raising both together gently.

In feeding fluids at these times always serve in small tumbler, not more than two-thirds filled; see that swallows are not taken during inspiration, and that each mouthful is swallowed before another is offered. In case the head cannot be raised, food may be given by means of a glass tube or a feeding cup.

The feeding of unconscious patients demands especial care. They should be given only liquid nourishment, and fed with a spoon, or through a catheter. If the jaw is set, a medicine dropper may be utilized; not over a teaspoonful should be given at once, and the nurse must be sure it is swallowed before she gives more. Feeding with the stomach tube is sometimes resorted to, and nasal feeding is employed in the case of young infants.

The awakening of a patient to take nourishment depends upon his need of the nutriment and upon his ability to go to sleep again. In serious cases it should be given at stated intervals if the patient drops to sleep easily after taking it. Some patients, however, are annoyed by being awakened and cannot sleep again. In such cases it may be that the sleep will be more beneficial than food.

THE TRAY

The writer's intention is only to suggest to the nurse the best and simplest methods of arranging the tray and a few of the important details.

These things seem trivial, but it must be remembered that the horizon of the sick-room is limited, and that the patient who has long been confined to bed with a serious illness thinks much of his immediate surroundings.

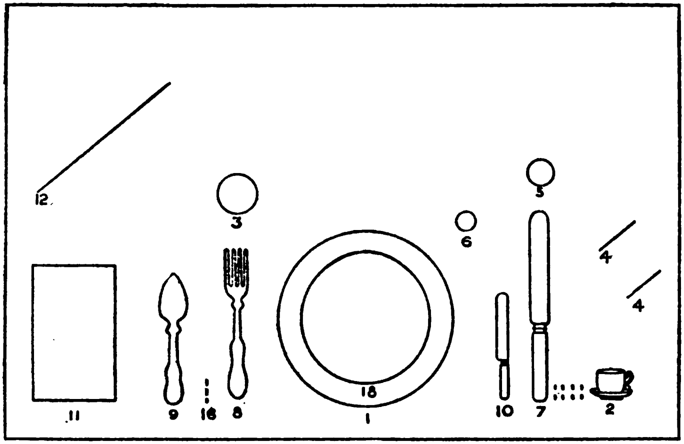
He may seem too ill to notice these details, whereas he is only too ill to speak of them, for one feeds with the eyes quite as much as with the lips, and by some carelessness of the nurse the appetite of a refined, fastidious, or nervous patient may be wholly destroyed.

While the natural stimulants to appetite, such as fresh air, exercise and enlivening companionship, are necessarily wanting, the taking of food is the chief event of the day, and too much care cannot be bestowed upon its preparation and service, as, has been said, the appearance and manner of offering have much to do with its acceptance or rejection.

SIMPLE ARRANGEMENT OF A TRAY

The cover and the arrangement of the tray is of the utmost importance, and the slightest departure from regularity and immaculate cleanliness should be avoided.

The tray should be covered with fine linen damask, without crease or wrinkle—the best you can afford. Use the choicest silver, daintiest china and glassware; arrange neatly and conveniently. Place a single rose or flower on the tray; a quotation, added as a variety, will often attract the attention, and it is well, when pos-



Proper Placing

1 Plate.
2 Cup and saucer.
3 Bread and butter plate.
4 Individual creamer and sugar.
5 Tumbler.
6 Individual salt.
7 Knife.
8 Fork.
9 Spoon.
10 Butter spread.
11 Napkin.
12 Flowers.

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13 Salad knife.
14 Soup spoon.
15 Oyster fork.
16 Salad fork.
17 After coffee spoon.
18 Soup or cereal or berry plate, etc.

N.B.—The dots between numbers 7 and 2 reading from left to right represent numbers 13, 14, 15, and 17. Sharp edge of knife turned toward plate; tines of forks, bowl of spoons, all dishes and tumblers placed right side up.

sible, to divert the patient's mind from his ailments while eating. This can easily be done in these little ways, and also by the introduction of some cheerful and interesting topic of conversation.

Avoid serving too many things on tray. When the dietary ordered is very limited in variety, the patient is often gratified by having his food served in courses, and will eat more than if given everything at once.

Only a small quantity should be served at one time. If possible, taste of all food and drinks before serving, to see if properly seasoned and at right temperature to serve.

Always use separate spoon for tasting.

Food to be served hot, should be served *hot* (not lukewarm), in heated dishes.

Cold drinks and fruits are more healthful when served cool than ice-cold.

When fluid foods are to be given, other receptacles should be used than those used for medicine, or the association of ideas may be strong enough to destroy what little appetite the patient may have, and may even produce nausea. Do not fill cups or glasses full, but within one inch of the top. For individual dishes, for a luncheon, or drinks to be passed alone, use a small tray or plate, covered with a doily or folded napkin.

The finger-bowl should be placed on a small plate, covered with a dainty doily; fill one-fourth full of water, and put a few rose petals or green leaves in the water and on the side of the plate.

When possible, cover all foods and drinks left standing in the sick room.

The tray and all traces of a meal should be removed immediately after eating. Half emptied cups or glasses should never be left in the room.

If the patient is restricted to any especial diet, vary as far as possible in the preparation and serving.

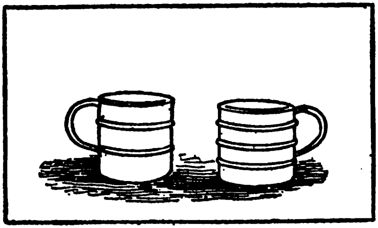
The diet of the patient should be under the supervision of the physician, and his directions followed implicitly, for much unnecessary suffering, and even death, has been the result of giving forbidden food.

MEASUREMENTS

Accurate measurement is necessary to insure success in cooking.

All dry ingredients, such as flour, meal, confectioners' or powdered sugar, should be sifted before using.

Mustard, cream of tartar, soda, and salt should be stirred before measuring, to lighten and free from lumps.



A Standard Measuring Cup.

A standard measuring cup contains one-half pint and is divided into fourths and thirds.

To measure a cupful of dry material, put in the ingredients by spoonfuls, round slightly and level with back of case-knife, being careful not to shake cup.

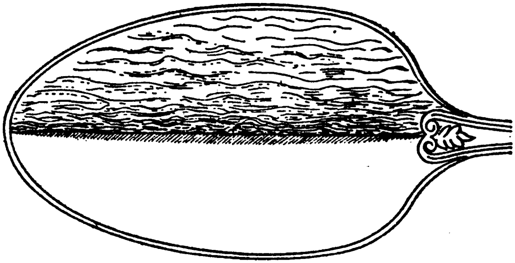
A cupful is measured level with the brim.

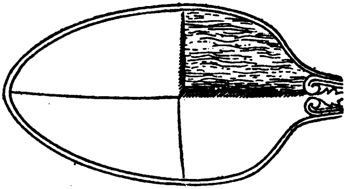
A heaping cupful is measured rounding, not as much as cup will hold.

A scant cupful is measured level, with two spoonfuls taken out.

All ingredients measured by the tablespoon or teaspoon are measured level.

To measure a spoonful, fill the spoon and level it off with the back of case-knife.





To measure a half-spoonful, first measure a spoonful and then cut it in halves, lengthwise.

To measure a quarter-spoonful, measure a half-spoonful and divide it into half, crosswise, allowing a little more for tip of spoon.

A saltspoon is one-fourth of a level teaspoon.

A speck is a little less than one-eighth of a teaspoon.

To measure butter, lard, and other solid fats, pack solidly into spoon or cup and level with knife.

When recipe calls for one tablespoon (or so) of *butter melted*, measure before melting. When recipe calls for one tablespoon (or so) of *melted butter*, measure after melting.

TABLE OF MEASURES AND WEIGHTS

4 saltspoons	=	1 teaspoon.
3 teaspoons	=	1 tablespoon.
4 tablespoons	=	¼ cup or ½ gill.
16 tablespoons	=	1 cup.
2 gills	=	1 cup.
2 cups	=	1 pint.
2 pints	=	1 quart.
4 quarts	=	1 gallon.

2 tablespoons butter........................= 1 ounce.
4 tablespoons flour.........................= 1 ounce.
2 tablespoons granulated sugar.............= 1 ounce.
2 tablespoons liquid.......................= 1 ounce.
2 tablespoons powdered lime................= 1 ounce.
1 square baker's unsweetened chocolate......= 1 ounce.
5 tablespoons liquid.......................= 1 wineglassful.

DRINKS: HOT AND COLD

ACID—ALBUMINOUS—STARCHY—MISCELLANEOUS

ACID DRINKS

Drinks made from fruit juices contain mineral matter and acids which act upon the blood. They are especially valuable for fever patients. Used cold, they are refreshing, and although they have but a low food value, they help to create an appetite for more nourishing food.

The water quenches thirst, regulates the body temperature, enters into the circulatory system, carries off waste, stimulates the nervous system and various organs.

Iced liquids should not be served during the process of digestion, because the body temperature should not be lowered during that process, and because they hinder the secretion of the digestive fluids, and thus lessen the activity of digestion.

The water used in making these drinks should be drawn after it has been running from the faucet for several minutes, and then freshly boiled.

Use water while boiling, as this develops a better flavor of the fruit, and also serves to sterilize the water.

The boiling temperature of water at sea level is 212 degrees Fahrenheit or 100 degrees Centigrade.

Wash lemons and oranges, and in using the juice remove the seeds, as they give a bitter taste. When the rind of lemon or orange is undesirable medicinally, it should not be used.

Drinks to be served cold, must be *cold;* and those to be served hot, must be *hot,* never lukewarm.

Use separate spoon, and taste drinks to be sure they are properly seasoned and at correct temperature. A comfortable temperature is 122 degrees Fahrenheit; 140 is as hot as one can take a liquid. Do not use ice *in* a liquid unless it is known to be pure; but cool *on* ice.

The drink should be covered while cooling or standing.

Serve daintily in glasses or sherbet cups (three-fourths filled), pass on small tray or plate, covered with doily, and add a few wafer crackers, or a single flower.

Never allow the drink to stand any length of time in sick-room.

For the Diabetic.—In all acid drinks substitute Sweetina for sugar.

LEMONADE

1 lemon.
1 cup boiling water.
2 tablespoons sugar.
½ thin slice lemon.

Wash and wipe lemon; cut a very thin slice from middle. Squeeze juice into a bowl (keeping back the seeds), add the sugar and boiling water; cover, and put on ice to cool. Strain and pour into a glass or sherbet cup.

Cut half the slice of lemon into two pieces, and use as garnish in glass; or a few berries or slice of orange may be used.

Note.—The quantity of sugar used depends upon the acidity of fruit.

ORANGEADE

1 sour orange.
1 cup boiling water.
2 tablespoons sugar.
½ slice orange.

Prepare as for lemonade. If orange is not very acid, add a little lemon juice or use less sugar.

PINEAPPLE LEMONADE

½ cup grated pineapple.
Juice 1 lemon.
2 tablespoons sugar.
½ cup boiling water.
1 cup ice-cold water.

Mix pineapple, lemon juice and sugar, and add the boiling water. Cool, add ice-cold water, strain and serve.

Note.—Canned pineapple may be used

FRUITADE

¼ cup chopped pineapple.	**1 cup boiling water.**
Juice ½ lemon.	**Sugar.**
Juice ½ orange.	

Prepare fruit. Add the boiling water and one tablespoon sugar; allow to stand until cool. Add more water or sugar if necessary. Strain and serve *cold.*

FRUIT LEMONADE

Add fresh fruit of all kinds to strong lemonade, using boiling water for the beverage, and letting it stand on ice until cool.

IRISH MOSS LEMONADE

¼ cup Irish moss.	**4 tablespoons lemon juice.**
2 cups boiling water.	**Sugar.**

Soak, pick over and wash the moss, soaking one-half hour. Pour off water and add the boiling water; cook until syrupy, keeping it just below the boiling point. If it becomes too thick, add more hot water. Strain, add the lemon juice and sugar to taste. Serve *hot.*

Excellent for sore throat and cold on the lungs, or any inflammation of the mucous membrane.

BRAN LEMONADE

¼ cup wheat bran.	**Juice 1 lemon.**
2 cups cold water.	

Allow the bran and water to stand overnight. Strain, and add the juice of the lemon.

EFFERVESCENT DRINK

Juice of 1 lemon.	**1 cup cold water.**
1 or 2 tablespoons sugar.	**½ teaspoon soda, free from lumps.**

Prepare the lemonade to taste, cool, add the soda, stir thoroughly, and drink while effervescing. Put glass on plate when soda is added.

LEMON WHEY

1 cup hot milk.	2 tablespoons lemon juice.
2 teaspoons sugar.	

Heat the milk in a small saucepan over hot water, or in a double-boiler. Add the lemon juice. Cook without stirring until the whey separates. Strain through cheesecloth, and add the sugar. Serve hot or cold. Garnish with small pieces of slice of lemon.

WINE WHEY

1 cup sweet milk.	¼ cup sherry wine.

Heat the milk to boiling point, add the wine, and cook without stirring until the milk separates. Strain through a fine strainer, and serve hot or cold.

CREAM OF TARTAR DRINK

1 or 1½ teaspoons Stickney & Poor's Cream of Tartar.	Lemon.
	Sugar.
1 pint boiling water.	

Dissolve the cream of tartar in the boiling water, and flavor with lemon and sugar. When cold strain. Take as a refrigerant drink and diuretic.

MALTED MILK AND CURRANT JELLY

1 tablespoon Horlick's Malted Milk.	1 tablespoon currant jelly.
	¾ cup cold water.
¼ cup boiling water.	Cracked ice.

Mix the malted milk powder with a little of the boiling water to make a smooth paste, add the jelly and the rest of the water, and stir till the jelly is dissolved. Add the cold water and ice, strain and serve daintily in glass or sherbet cup, partly filled, and set on a small plate with doily.

JELLY AND ICE

With a large needle or pin, chip half a cup of ice into bits as large as a pea (or use an ice-scraper). Mix with it about the same quantity of lemon, currant, blackberry, or barberry jelly. Very refreshing in fevers. Be sure ice is perfectly pure.

GRAPE WATER

4 tablespoons grape jelly.
½ cup boiling water.
½ cup cold water.
Lemon juice and sugar.

Dissolve the jelly in the boiling water, then add the cold water, season to taste. Serve *ice cold.*

CURRANT WATER

¼ cup currant juice or
4 tablespoons currant jelly.
½ cup boiling water.
½ cup cold water.
Lemon juice and sugar.

Dissolve the jelly in the boiling water (put over heat a few moments if it does not dissolve quickly). When dissolved add the cold water, sweeten to taste, and add a little lemon juice, if desired. Serve cold.

APPLE WATER

1 sour apple.
1 cup boiling water.
Lemon juice.
Sugar.

Wipe a rosy-cheeked sour apple, and, without paring it, cut it into small pieces. Add the boiling water and one tablespoon sugar. Cover, and let it stand till cold, then strain, and add lemon juice and sugar to taste. Serve cold.

Note.—Dried apple may be substituted, or two baked apples.

RHUBARB WATER

1 stalk rhubarb.
1 cup boiling water.
Lemon juice.
Sugar.

Wash and wipe the rhubarb, and cut in thin slices, leaving on the skin. Add the boiling water and one tablespoon sugar. Cover, and let stand till cold. Strain, add lemon juice and sugar to taste, and serve cold.

TAMARIND WATER

2 tablespoons preserved tamarinds.	1 cup boiling water.
	Sugar.

Pour the water over the tamarinds and let stand one-half hour. Sweeten to taste, strain and serve cold.

GRAPE JUICE

Welch's Grape Juice is a tonic food for the sick and convalescent; it is a food, a drink, a tonic and a medicine.

It may be served plain, cold or hot; or diluted with one-third water.

The colder the juice is kept and served, the better. The bottles may be kept on ice until ready to serve.

GRAPE LEMONADE

Make one cup lemonade, rather sweet, add one-fourth cup Welch's Grape Juice.

GRAPE LITHIA

Pour one ounce of Welch's Grape Juice into a glass, dissolve in it two teaspoons of sugar, and add four ounces of lithia water.

GRAPE NECTAR

Boil together one pound of sugar and one-half pint of water until it spins a thread; remove from the fire, and when cool, add the juice of six lemons and one quart of Welch's Grape Juice. Let stand over night. Serve with ice water, Apollinaris or plain soda.

TEA PUNCH

Few beverages find readier favor during the hot weather than tea punch. To make it, pour boiling lemonade, sweetened to taste, over the tea leaves, and allow the liquid to stand until cold. Then strain and serve in tall glasses, with shaved ice and slices of lemon.

FRUIT PUNCH

- 2 large teaspoons tea.
- 2 quarts boiling water.
- 1 pound lump sugar.
- 8 lemons.
- 3 oranges.
- 1 pineapple.
- 5 bananas.
- 1 pint strawberries.

Steep the tea in the boiling water for five minutes, strain and add the sugar, stirring until thoroughly dissolved. Grate the rind of the lemons and extract all the juice. Cut the oranges into slices, shred the pineapple, slice the bananas very thin and hull the strawberries. When the tea is cold add all the fruit, and let stand in the refrigerator for several hours. Place a cube of ice in the punch-bowl, pour the mixture around it, and when well chilled serve in punch glasses. If desired, one cup of Maraschino cherries may be added.

To get the best results from the pineapple, pare and remove the eyes, tear apart with a silver knife and fork, reject the core, sprinkle with sugar and let stand on ice for twelve hours.

While fresh fruits are always preferable, canned berries and pineapples may be substituted.

TUTTI-FRUTTI PUNCH

- 2 quarts water.
- 1 pound sugar.
- 2 lemons.
- 4 oranges.
- 2 dozen Malaga grapes.
- 2 tangerine oranges.
- 4 slices pineapple.
- 1 banana.
- 1 pint Maraschino cherries.

Boil together for five minutes the water and sugar. Add the grated rind of two lemons and four oranges, and continue boiling for ten minutes longer. Strain the syrup through cheese-cloth, and add one quart of cold water. Extract the juice from the lemons and oranges, strain and mix with two dozen Malaga grapes, cut in half and seeded, the tangerine oranges sliced, the pineapple shredded, the banana cut in slices, and one pint bottle of Maraschino cherries with their liquor. Add the fruit to the syrup, chill and serve same as Fruit Punch.

ACID PHOSPHATE

Horsford's Acid Phosphate is a solution of the phosphates of lime, magnesia, potash and iron with phosphoric acid, in such form as to be readily assimilated by the system. It is thus a true nerve and tissue food.

1 teaspoon Horsford's Acid Phosphate.
1 cup hot or cold water.
Sugar.

Mix the Acid Phosphate with the water and sweeten with sugar, if desired.

If the above should seem too strong, or be found too stimulating, use one-half teaspoon of the Acid Phosphate.

Note.—Horsford's Acid Phosphate can be substituted for lemon juice in any of the acid drinks calling for it.

ACID PHOSPHATE WHEY

1 cup hot milk.
2 teaspoons sugar.
1 teaspoon Horsford's Acid Phosphate.

Heat the milk in a small saucepan over hot water or in a double boiler. Add the Acid Phosphate. Cook without stirring until the whey separates. Strain through cheesecloth and add the sugar. If more acid is desired, add two or three drops of Horsford's Acid Phosphate. Serve hot or cold.

ALBUMINOUS DRINKS

When a large amount of nutriment is required the albuminized drinks are valuable.

The egg is a fluid food until its albumin is coagulated by heat. Often the white of egg, dissolved in water or milk, and flavored, is given when the yolk cannot be digested, as thirty per cent. of the yolk is fat. Egg-nog is very nutritious, and is extensively prescribed in certain non-febrile diseases, especially for the forced alimentation of phthisis and melancholia. There are occasional cases of bilious habit, in which eggs to be digested must be beaten in wine. But the combination of egg, milk and sugar with alcohol, which constitutes egg-nog, is apt to produce nausea and vomiting in a feeble stomach, especially in fever. For this reason whole eggs are unfit for fever patients, and the whites only should be used.

For the Diabetic.—In all the albuminous drinks substitute Sweetina for the sugar.

EGG BROTH

Yolk 1 egg.
1 tablespoon sugar.
Speck salt.
1 cup hot milk.
Brandy or some other stimulant if required.

Beat egg, add sugar and salt. Pour on carefully the hot milk. Flavor as desired, if with brandy or wine, use about one tablespoon.

Note.—Dried and rolled bread crumbs may be added, if desired. The whole egg may be used. Hot water may be substituted for the milk; nutmeg may be substituted for the stimulant.

EGG-NOG

1 egg.
Speck salt.
1 tablespoon sugar.
⅔ cup milk.
1½ tablespoon wine or
1 tablespoon brandy (or less).

Beat the egg, add the sugar and salt; blend thoroughly, add the milk and liquor. Serve immediately.

Note.—Have eggs and milk chilled before blending. A grating of nutmeg may be substituted for the stimulant.

EGG-NOG NO. II

1 egg.
1 tablespoon sugar.
Speck salt.
½ cup milk.
1 tablespoon brandy (or less).

Separate egg. Beat yolk, add sugar and salt, and beat until creamy. Add the milk and brandy. Beat the white till foamy (not stiff and dry), and fold it in lightly. Serve immediately.

JUNKET EGG-NOG

1 egg.
1 cup milk.
1 tablespoon sugar.
2 teaspoons rum, brandy, or wine.
¼ Hansen's Junket Tablet.

Beat white and yolk of egg separately, very light; blend the two. Add the sugar dissolved in the rum. Heat the milk lukewarm, stir into the egg mixture, and add quickly the tablet dissolved in cold water. Pour into small warm glasses, and sprinkle grated nutmeg over the top. Stand in warm room undisturbed until firm, and then put on ice to cool. This can be retained by the most delicate stomach.

BEEF EGG-NOG

1 egg.
Speck salt.
1 tablespoon sugar.
½ cup hot beef broth.
1 tablespoon brandy.

Beat the egg slightly, add the salt and sugar; add gradually the hot broth; add brandy and strain. Sugar and brandy may be omitted if preferred.

EGG AND RUM (MILK PUNCH)

Famous in the Treatment of Phthisis

1 cup fresh milk.
Yolk 1 egg.
1 tablespoon sugar.
Speck salt.
Few grains nutmeg.
1 tablespoon rum.

Beat yolk, add sugar, salt and nutmeg; add milk and rum.

Note.—For consumptives, taken at about six A.M., often prevents the exhausting sweats which accompany the morning doze. Also may be given to a patient before dressing to prevent exhaustion.

EGG AND BRANDY

3 eggs.
4 tablespoons cold water.
Nutmeg.
4 tablespoons brandy.
Sugar.

Beat the eggs, add cold water, brandy and sweeten to taste. A little nutmeg may be added. Give a tablespoonful at a time.

EGG AND WINE (MILK PUNCH)

1 egg.
½ cup cold water.
Sugar.
1 wineglass sherry.
Nutmeg.

Beat the egg. Heat the water and wine together but not boiling; pour onto the egg, stirring constantly; flavor with sugar and nutmeg.

ALBUMINIZED MILK

1 cup milk (sterile).
White 1 egg.
Salt.
Flavoring.

Place the milk and egg in a covered glass fruit jar; shake until thoroughly blended. It may be salted and flavors added if desired. Strain. Serve immediately.

ALBUMINIZED WATER

1 cup cold water boiled and cooled.
White 1 egg.
Lemon juice.
Sugar to taste.

Put all ingredients together into a covered glass fruit jar, and shake until thoroughly blended. If cooled near ice shake again should it separate. Strain. If filtered ice water be used, it may be served immediately.

ALBUMIN WATER (FOR INFANTS)

Albumin water is utilized chiefly in cases of acute stomach and intestinal disorders in which some nutritious and easily assimilated food is needed; albumin water is then very useful. The white of one egg is dissolved in eight ounces or a pint of water which has been boiled and cooled.—Koplik.

ALBUMINIZED CLAM WATER

1 cup cold water.	**White 1 egg.**
Burnham's Clam Bouillon	

To the water add the required amount of the clam bouillon to make the strength desired, add the unbeaten white of egg, and follow general directions for "Albuminized Water." Serve cold in dainty glasses. This is a very nutritious drink, and will be retained by the stomach when other nourishment is rejected.

Note.—Milk may be substituted for the water.

ALBUMINIZED ORANGE

White 1 egg.	**Sugar.**
Juice 1 orange.	

To the unbeaten white add the orange juice, sweeten to taste and blend thoroughly. Strain and set on ice to cool. Serve cold.

ALBUMINIZED SHERRY

White 1 egg.	**Sugar.**
½ to 1 tablespoon sherry.	

Beat the white stiff, add slowly while beating the wine and sugar. Serve cold.

Note.—Have all ingredients cold before blending.

ALBUMINIZED GRAPE JUICE

2 tablespoons Welch's Grape Juice.
White 1 egg.
Sugar.
Chopped ice.

Put in a dainty glass the grape juice, and the beaten white of egg and a little pure chopped ice; sprinkle sugar over the top and serve.

GRAPE YOLK

1 egg.
1 tablespoon sugar.
2 tablespoons Welch's Grape Juice.
Speck salt.

Separate egg. Beat yolk, add sugar and stand aside while the white is thoroughly whipped. Add the grape juice to the yolk and pour this onto the whipped white, blending carefully. Serve cold. Have all ingredients chilled before using.

GRAPE JUICE AND EGG

1 egg.
½ cup rich milk.
1 tablespoon sugar.
¼ cup Welch's Grape Juice.

Beat yolk and white separately very light. To the yolk add milk, sugar and grape juice, and pour into glass. To the white add a little powdered sugar and a taste of grape juice. Serve on yolk mixture. Chill all ingredients before using.

EGG LEMONADE

1 egg.
2 tablespoons sugar.
2 tablespoons lemon juice.
1 cup cold water.

Beat the egg thoroughly, add the sugar and lemon juice; pour in gradually the water, stirring until smooth and well mixed. Strain and serve.

MALTED MILK AND EGG

1 tablespoon Horlick's Malted Milk.
1 tablespoon crushed fruit.
1 egg.
20 drops acid phosphate.
1 tablespoon crushed ice.
¾ cup ice water.

Mix the malted milk powder, crushed fruit and egg and beat five minutes. Add the phosphate and crushed ice, blending thoroughly. Strain and add ice water or cold carbonated water, and a grating of nutmeg to flavor.

STARCHY DRINKS

Starchy drinks should be taken slowly that the starch, which is partially digested by the action of the saliva, may be thoroughly mixed with it. Cooking temperature 212 degrees Fahrenheit. Thorough cooking.

BARLEY WATER

1½ tablespoon pearl barley.
1 quart cold water.
Salt.

Wash barley, add cold water and let soak several hours or over night. Drain and add the fresh cold water, boil gently over direct heat two hours, or in a double boiler steadily four hours, down to one pint, adding water from time to time; season with salt. Strain through muslin.

Note.—Cream or milk may be added or lemon juice and sugar. Barley water is an astringent or demulcent drink used to reduce laxative condition.

BARLEY WATER (INFANT FEEDING)

1 teaspoon Robinson's Barley Flour.
2 tablespoons cold water.
1 pint boiling water.

Blend flour and cold water to a smooth paste; add gradually to the boiling water, boil five minutes or until the whole becomes clear, stirring constantly. Older infants take the barley water in much more concentrated form. Barley water is used as a diluent with normal infants and in forms of diarrhœa.

RICE WATER

2 tablespoons rice.
1 pint cold water.
Salt.
Milk.

Wash and pick over the rice; add cold water and cook one hour or until rice is tender. Strain and dilute with boiling water or hot milk to desired consistency. Season with salt.

Note.—Sugar may be added if desired, and cinnamon, if allowed, may be cooked with it, and will assist in reducing a laxative condition.

RICE WATER NO. II

3 tablespoons rice.	1 tablespoon stoned raisins.
1 pint boiling water.	

Wash rice, put into saucepan with water and raisins; boil gently for one hour. Strain. When cold serve. Sugar or salt may be added to taste.

Note.—Do not use raisins in bowel trouble.

OATMEAL WATER

1 tablespoon oatmeal.	Speck salt.
1 tablespoon cold water.	1 quart boiling water.

Mix oatmeal and cold water, add salt and stir into the boiling water. Boil three hours; replenish the water as it boils away. Strain through a fine sieve or cheese cloth. Season, serve cold. Different brands of oatmeal vary considerably in the amount of water which they take up in cooking, and sufficient should always be added to make this drink almost as thin as water.

OATMEAL WATER NO. II

½ cup fine oatmeal.	1 quart water.

Use sterile water (boiled and cooled). Add oatmeal and stand in warm place (covered), for one and one-half hours. Strain, season, and cool. Sometimes used for dyspeptics.

TOAST WATER

1 cup stale bread toasted.	Salt.
1 cup boiling water.	

Cut bread in thin slices and in inch squares. Dry thoroughly in oven until crisp and a delicate brown. Measure, and break into crumbs; add the water and let it stand one hour. Strain through cheese cloth, season and serve hot or cold. The nourishment of the bread is easily absorbed in this way and valuable in cases of fever or extreme nausea.

Note.—Milk or cream and sugar may be added.

CRUST COFFEE

Take some pieces and crusts of brown bread and dry them in a slow oven until thoroughly hard and crisp. Place in a mortar and pound or roll. Pour boiling water over and let soak for about fifteen minutes. This when strained carefully is very acceptable to invalids who are tired of the ordinary drinks, such as lemonade, etc.

CRACKER PANADA

4 hard crackers.
1 quart water.
Sugar.

Break crackers into pieces and bake quite brown; add water and boil fifteen minutes, allow to stand three or four minutes. Strain off the liquid through a fine wire sieve; season, salt and a little sugar. This is a nourishing beverage for infants that are teething, and with the addition of a little wine and nutmeg, is often prescribed for invalids recovering from a fever.

BREAD PANADA

1½ cups water.
1 tablespoon sugar.
2 tablespoons stale white bread crumbs.
¼ cup white wine.
1 tablespoon lemon juice.
Nutmeg.

Put water and sugar on to cook, just before it commences to boil add the bread crumbs; stir well, and let it boil three or four minutes. Add the wine, lemon and a grating of nutmeg; let it boil up once, remove from fire, and keep it closely covered until it is wanted for use.

DRIED FRUIT SOUP

½ cup dried apricots.	**1 pint cold water.**
½ cup prunes.	**Sugar to taste.**

Pick over and wash fruit until perfectly clean. Cook in the water until very soft. Strain and squeeze out all the juice; sweeten to taste. Thicken if liked.

Thickening.—1 slightly rounding teaspoon rice flour to 1 cup liquid. Cook twenty minutes to remove raw taste of starch.

MISCELLANEOUS DRINKS

MULLED WINE

1 ounce stick cinnamon.	1 cup port or claret wine, or less.
A slight grating nutmeg.	2 tablespoons sugar.
½ cup water.	1 egg.

Put the spices into a bowl with the water. Cover the bowl and stand in a bowl of boiling water and cook ten minutes. Add wine and sugar and serve at once; or beat the white of egg to a stiff froth, then beat the yolk into it, pour the mulled wine on this and beat well. Serve at once.

FLAXSEED TEA

1 tablespoon whole flaxseed.	Juice 1 lemon.
2 cups cold water.	Sugar.

Wash flaxseed thoroughly, put it with the cold water in a saucepan, simmer one hour, add lemon juice and sugar to taste and strain.

Note.—If too thick, add hot water.

Valuable in case of inflammation of the mucous membrane.

CINNAMON WATER

1 ounce stick cinnamon.	1 pint boiling water.

Boil together fifteen minutes. Strain. Serve hot or cold.

Note.—Good in bowel trouble. The pure cinnamon is quite different from the coarse bark usually sold for cinnamon, which is really only cassia.

FLAXSEED AND LICORICE TEA

1 ounce flaxseed.	1 pint boiling water.
2 drachms licorice root.	

Pour the boiling water over whole flaxseed and bruised licorice-root, cover and cook very slowly for four hours. Strain.

LIME WATER—HOSPITAL DRUGGIST RECIPE

"A saturated aqueous solution of Calcium Hydrate—$Ca(H_2O)$."

Directions.—Slake one ounce of lime by the gradual addition of one-half cup distilled water, and agitate occasionally during one-half hour. Allow the mixture to settle; decant the liquid and throw it away. Add one gallon more of distilled water to the lime, agitate thoroughly and wait a short time for the coarse particles to subside, then pour the liquid—holding the undissolved lime in suspension—into a glass-stoppered bottle.

Note.—From time to time shake so as to keep the solution saturated. Pour off the clear liquid when it is wanted to use. It absorbs carbon dioxide from the air, so keep tightly corked. Keep in cool place.

BRAN TEA

¼ cup wheat bran.
2 cups cold water.
Egg shell.
Molasses, lemon juice.

Boil the water and bran twenty minutes, and settle it with an egg shell or a little cold water. Sweeten with molasses, and lemon juice can be used if desired.

SLIPPERY ELM TEA

2 teaspoons slippery elm powder or piece of the bark.
1 cup boiling water.
Sugar.
Lemon juice.

Pour the water upon the slippery-elm powder or bark. When cool, strain and flavor with lemon juice and sugar. This is soothing in case of inflammation of the mucous membrane.

HERB TEA

Pour one cup of boiling water over two tablespoons of herbs. Cover the bowl, set it over the tea-kettle and steep ten minutes. Sweeten if desired.

MALTED MILK WITH WINE

1 tablespoon Horlick's Malted Milk.
1 cup hot water.
1 teaspoon port or sherry wine.
1 teaspoon sugar.

Mix the malted milk powder with enough of the hot water to make a smooth paste, then add gradually the rest of the hot water, the wine, and sugar if desired.

TAMARIND MALTED MILK

2 tablespoons Horlick's Malted Milk.
1 tablespoon tamarinds.
¼ cup hot water.
½ cup cold water.
Cracked ice.

Make a smooth paste of the malted milk powder and hot water, add preserved tamarinds and the cold water. Strain and chill, or add pure cracked ice.

REFRESHING DRINK FOR SUMMER

2 tablespoons chopped ice.
2 tablespoons chocolate syrup.
3 tablespoons whipped cream.
½ cup milk.
¼ cup soda water or Apollinaris water.

Shake or stir well before drinking. A tablespoon of vanilla ice-cream is a desirable addition. It is a delicious drink, even if the soda or Apollinaris water be omitted.

A plainer drink is made by combining the syrup, three-fourths cup milk and the ice, and shaking well.

CHOCOLATE SYRUP—USED IN PRECEDING

1 ounce (3 tablespoons) Walter Baker's soluble chocolate.
1 cup boiling water.
2 cups sugar.
1 tablespoon vanilla.

Put chocolate in a saucepan and add the water gradually, stirring all the time. Add sugar and stir till it begins to boil; boil three minutes, strain, cool and add one tablespoon vanilla. Bottle, and keep in a cold place.

MILK

The type of " Fluid Food " is milk. Upon this food life can be sustained for an indefinite period. It is a natural food and contains nutrients in correct proportions for the growth of the young of many animals. A perfect food of any living thing must necessarily contain all the elements of which its body is composed.

Milk contains the food principles in such quantities as to contribute to the rapid formation of bone and the various tissues of the body during infancy; but after that period, milk alone is not a perfect food because the amount of water it contains is so great that very large quantities would have to be taken in order to furnish the required amount of nourishment; and also, because the digestive organs require a certain amount of waste material to assist their action.

Composition of Milk.—Milk contains three distinct substances which separate after standing.

(1) Cream, the carbonaceous part, or fat.

(2) Curd, the nitrogenous part (casein), the solid which forms when milk sours or curdles.

(3) Whey, the watery part which separates from the solid and consists of the water, sugar and mineral water of the milk.

Digestion of Milk.—It must be borne in mind that milk curdles in the first step of digestion and, therefore, when taken, it should be diluted and should be used with discretion, not drunk immoderately. The patient should drink slowly or sip by the spoonful in small quantities at frequent, regular intervals. Milk is taken as a fluid, but as soon as it meets the gastric juice it is changed to a soft, curdy, cheese-like substance. If taken slowly it forms a porous lump through which the gastric juice can easily pass; if taken rapidly, in large quantities, it forms a lump of dense, cheesy curd of which the digestive fluids can attack only the outer surface; it therefore digests very slowly and, to a weak stomach, may prove fatal.

The light curd is usually readily redissolved in the alimentary canal, but sometimes it is not. Especially is this firm curdling liable to occur when there is acidity present in the digestive tract. The firm, hard curd is an irritant to the whole intestinal surface, and in conditions of ulceration (either tuberculous or that set up in enteric fever), hard pieces of curd may rupture or perforate the weakened bowel.

The pieces of curd may be seen in the stools. When such is the case, the milk must be so combined as to prevent this hard curd forming.

It is generally conceded that in typhoid fever and diphtheria milk should constitute the diet in the early stages of either disease. In cases where it cannot be taken alone (as discovered by finding curd in the stool of patient), it may be used in combination with soda, seltzer, Apollinaris or vichy water. It may happen that the digestive organs cannot tolerate raw milk, but by means of the use of Peptonising Tubes, which contain pancreatic ferments, it may have its casein converted into diffusible peptones.

Peptonised Milk is milk in which the casein (curd) has been partially or wholly digested. This is accomplished by the action of the Peptonising Tubes, which are composed of a digestive agent, known as the extractum pancreatis, and bicarbonate of soda, which is added to plain or diluted milk. The partially peptonised milk is useful for impaired digestive power, and the completely peptonised milk during acute attacks of indigestion, etc.

Junket is a valuable method of using milk. It is made of pure milk, containing enough of the active principle of rennet (found in the Junket Tablet) to coagulate the milk, which gives it the added advantage of being easily digested. It is useful in cases of indigestion, exhaustion or inability to retain other food.

Malted Milk is a pure food prepared from rich full-cream milk, combined with the valuable nutritive extracts of malted barley and wheat. This product being highly concentrated and partially predigested, supplies a large amount of nutrition with little tax upon the digestive organs. It is a valuable nutrient in dyspepsia or impaired digestion, for fever and wasting diseases, the convalescent, nursing mothers, and the aged.

Whey.—Milk is sometimes too clogging and as a temporary substitute whey may be given. As in the coagulation of milk, the curd takes with it the casein and most of the fat, the whey contains only the sugar and salts dissolved in the water, with a very small portion of nitrogenous substances. It makes a palatable, mildly diuretic drink.

Modified Milk is milk containing definite proportions of fat, sugar, proteids, etc., put up usually according to the formula of a physician who prescribes the quantity of the different constituents he desires.

For sick children and in convalescence it is of great value to obtain a modification in which the composition is definite and accurate. It can then be known what mixtures will agree with the patient.

Kumyss was originally made from mare's milk. A close imitation of the product is now manufactured artificially from cow's milk. The usual method is to add to milk a certain quantity of cane sugar and then to inoculate it with some common species of yeast. The result is a combination of lactic and alcoholic fermentation and the casein is modified. This preparation, which has become within the last few years comparatively well known and widely used as a food for invalids, is wholesome, nutritious, and possesses important medicinal properties.

Matzoon is a form of milk in which lactic acid fermentation has been produced by the use of a ferment found in Syria. It has the same general properties and effect as kumyss.

Buttermilk with its lactic acid is given where there is much thirst, and in diabetes.

Milk is commonly taken with lime water (where this is insufficiently alkaline magnesia must be used). Milk may be boiled with a little ground rice and flavored with cinnamon, and is an excellent food where there is any looseness of the bowels. Skimmed milk is beneficial in pyrexial states where undiluted milk is too heavy; milk taken slowly with dry toast forms a porous substance through which the gastric juice can easily pass.

Care of Milk.—Milk while standing should be covered with a cloth to prevent it absorbing impurities from the air, as it is one of the best of foods for bacteria, many of the ordinary forms growing in it with exceeding rapidity under favorable conditions of temperature. And although such milk may not contain the seed of any certain disease, it sometimes causes serious digestive disturbances with young children or the sick, and may thus become indirectly the cause of fatal maladies.

As milk and water are the two most fruitful food sources of disease, it is apparent that unless positively known to be pure they should be either pasteurized or sterilized before using.

When preparing dishes where milk is used, the condition of the patient should be considered. Boiling milk conduces to constipation, therefore, if the patient is so troubled, care should be taken not to heat the milk above the boiling point.

To Test the Purity of Milk.—If you suspect that milk contains formalin or other artificial preservatives, set a glassful in a warm place for six or seven hours. If it sours it is pure; if it remains sweet it probably contains formalin, and it should be sent to the city laboratory immediately for analysis.

PASTEURIZATION

Pasteurization of milk is now being extensively practised, and it is found to be an especially good means of preservation. The heat is sufficient to destroy all bacteria likely to be present in the milk without so much alteration of its properties as occur in sterilization, and it is more easily digested than sterilized milk. Bad milk cannot be made perfect by pasteurization, but the dangers from its consumption can be lessened; most of the disease germs which are liable to be distributed by milk are destroyed, which removes the dangers of distributing contagious disease.

It has the advantage of tasting more like fresh milk —and must be used while fresh as it will only keep two or three days—thus saving the dangers of taking milk that has been sterilized and kept for some time in which the bacteria may not have been wholly killed.

Pasteurization of milk consists in heating it rapidly to about 68 degrees Centigrade, or 155 degrees Fahrenheit, keeping it at that temperature thirty minutes, then cooling it rapidly to 20 degrees Centigrade or 68 degrees Fahrenheit.

Methods of Preparing.—Put bottle into kettle of cold water and slowly bring to the boiling point. Boil ten minutes. After which fill immediately nearly full with milk; cork with absorbent cotton which has been baked in the oven until a delicate brown. Place bottles on a rest in a deep pan so that they will not touch bottom, and fill the pan with cold water to reach as high as the milk in bottles. Heat water gradually to 155 degrees Fahrenheit, or until small bubbles appear in the milk next to the glass. Remove to back of stove and keep milk at same temperature for thirty minutes; then cool quickly by putting bottles first into lukewarm water and then cold water until milk is cold. Keep in cold place and do not remove stoppers until ready to use.

A convenient form of apparatus for pasteurization is known as the Walker-Gordon Laboratory Sterilizer. Or a covered tin pail answers well for the larger vessel, and an inverted pie pan with perforated bottom can serve as the false bottom. A hole may be punched in the cover of the pail, a cork inserted and a chemical thermometer put through the cork so that the bulb dips in the water, thus enabling one to watch the temperature closely without removing the cover, or an ordinary dairy thermometer may be used from time to time by removing the lid.

STERILIZATION

A sufficiently high temperature destroys all bacteria. But the temperature is so high that it produces certain changes in the nature of milk. It cooks the milk, and the feasibility of the process depends upon the nature and significance of these changes. A temperature of 220 degrees Fahrenheit continued for half an hour is commonly, though not always, sufficient for the purpose. In some cases it is thought best to continue the sterilization for one hour or one hour and a half. To accomplish a perfect sterilization it is necessary to heat milk in a closed vessel under steam pressure sufficient to give a temperature of several degrees above boiling, the exact temperature being dependent upon the length of time the heating continues. For the sick it is well to use fresh sterilized milk; for sterilized milk is not always found to be sterile. While a few bacteria present in raw milk are of no great importance, the presence of a single spore left in sterilized milk and kept for some time will fill the fluid with bacteria. Sterilization does not improve the digestibility of milk, but rather the contrary; it is also more constipating. It is often advisable to sterilize milk for feeding to typhoid fever patients and others in whom asepsis of the alimentary canal is of paramount importance.

Method of Preparing.—Follow general directions as for pasteurization, with the change of temperature and time.

EVAPORATED MILK

It is sometimes of advantage, as in cases of dilated stomach or whenever the total amount of fluids must be cut down to a given point, to heat the milk in a pan over which is placed an inverted funnel. Much of the water of the milk passes off as vapor, while the solids condense along the sides of the funnel and run back into the pan.

BOILED MILK

A practical method of nearly sterilizing milk is the simple process of boiling milk, and is very widely adopted. Boiling milk does not sterilize it and the milk cannot be preserved indefinitely, but it does destroy most of the bacteria. The following precautions in preparing should always be used. Serve immediately, or pour into sterile bottle, cork with sterile absorbent cotton, and do not open until ready to use.

MALTED MILK

Mix one tablespoon of Horlick's Malted Milk powder with a little tepid water to make a smooth paste; add three-fourths cup water, hot or cold, stirring briskly and serve.

Note.—May be prepared with hot milk instead of water and a little cream added if desired.

MODIFIED MILK

Milk is separated into its several parts and recombined in different proportions to better suit the needs of the individual case.

The accuracy of the laboratory cannot be attained in home modification of milk. No matter how carefully the milk is put together, there are details which are impracticable at home. In the laboratory the milk supply is controlled; the milk has a definite composition; the modification is more accurately carried out.

These modifications are scientifically prepared by the Walker-Gordon Laboratories, located in all large cities in the United States. They provide a milk bacteriologically and chemically pure. It is of especial use in the feeding of infants. The cows' milk is modified to imitate human milk and put up according to the physician's prescription, and delivered fresh daily.

PEPTONISED MILK

Into a clean, quart bottle put the powder contained in one of the Fairchild Peptonising Tubes, and a teacupful (gill) of cold water; shake, then add a pint of fresh, cold milk, and shake the mixture again. Place the bottle in water so hot that the whole hand can be held in it without discomfort. (About 115° F.)

Keep the bottle there 5 or 10 minutes as directed.

At the end of that time put the bottle on ice *at once* to check further digestion and keep the milk from spoiling.

Place the bottle directly in contact with the ice.

The degree of digestion is very simply regulated by the length of *time* in which the milk is kept warm.

PARTIALLY PEPTONISED MILK

Put into a clean agate ware, or porcelain-lined saucepan, the powder contained in one of the Fairchild Peptonising Tubes, and a teacupful (gill) of cold water; stir well; then add a pint of cold, fresh milk. Heat with constant stirring until the mixture boils. The heat should be so applied that the milk will come to a boil in 10 minutes. When cool, strain into a clean bottle, cork well and keep in a cold place. When needed, shake the bottle, pour out the required portion, and serve cold, or hot, as directed by the physician in charge.

N. B.—Milk so prepared *will not* become bitter.

BY THE COLD PROCESS

Into a clean, quart bottle put the powder contained in one of the Fairchild Peptonising Tubes, and a teacupful (gill) of cold water; shake, then add a pint of fresh, cold milk, shake the mixture again and immediately place the bottle on ice, without subjecting it to the water-bath or any heat. Place the bottle directly in contact with the ice.

When needed, shake the bottle, pour out the required portion, and use in the same manner as ordinary milk.

IMMEDIATE PROCESS

Put two tablespoonfuls (1 oz.) of cold water in a goblet or glass; dissolve in this one quarter the contents of a Peptonising Tube; add eight tablespoonfuls (4 ozs.) of warm milk; drink immediately, sipping slowly.

If half a pint of milk is required, double the proportions of water, Peptonising Powder, and milk.

KUMYSS

⅙ cake Fleischmann's yeast.
1½ tablespoons sugar.
1 tablespoon water.
1 quart milk.

Make a thin syrup of the sugar and water and cook one minute. Soften the yeast in two tablespoons of lukewarm milk. Heat the milk until lukewarm, add other ingredients and shake. Put in sterile patent beer bottles, place in upright position for twelve hours, at 70 degrees Fahrenheit (or comfortably warm room); then turn on side at heat 50 degrees Fahrenheit (lower part of ice-box). Ready for use after the first twenty-four hours; often kept several days, but the longer it is kept the less palatable it is. Do not open a bottle of kumyss without a champagne tap, or the cork may be punctured with a stout needle to let the gas escape. It should look like thick, foamy cream.

Kumyss is especially suited for many forms of indigestion, nausea, fever and gastric trouble, pulmonary consumption and other wasting disease.

Dr. Brush's prepared kumyss is recommended on account of its superiority over the home-made preparations, as the milk supply is controlled, and the method of preparing is carried out upon scientific bases. It is also more convenient, as it is ready for immediate use.

MATZOON OR ZOOLAK (GERMAN HOSPITAL, NEW YORK CITY)

Take forty-five pints of milk, boil thoroughly. Cream two or three times; that is, until all the cream is removed. When the milk is still quite warm add two (2) bottles of prepared bottled Zoolak. Mix thoroughly. Bottle quickly in pint bottles, not entirely full. Cork tightly immediately, and put in a warm place till the liquid shows creamy through the bottles. Then place and keep in a cold place.

N. B.—If chilled before it is thick it remains thin and the flavor is spoiled. If not kept very cold after it is made the fermentation is carried too far.

MATZOON NO. II

2 quarts milk.	**2 ounces matzoon.**

Boil fresh milk for ten minutes, remove from fire and when lukewarm add matzoon, stirring well together. Cover tightly with flannel cloth and allow to stand for eight hours in a comfortably warm room, 68 to 70 degrees Fahrenheit. After that time it should be very thick and creamy. Cork tightly and keep in a very cold place. By shaking well before serving it will become thinner and can be taken plain or with vichy.

JUNKET

1 cup fresh milk.	1 teaspoon cold water.
¼ Hansen's Junket Tablet.	

Heat the milk until lukewarm; add the tablet dissolved in the cold water; allow it to jelly in a warm place; chill in ice-box; serve plain or in the various ways as directed in chapter "Nutritious Desserts."

WHEY

1 cup fresh milk.	1 teaspoon cold water.
¼ Hansen's Junket Tablet.	

Heat the milk until lukewarm; add the tablet, dissolved in the cold water. Allow it to jelly in a warm place. Then break up the curd and strain through two thicknesses of cheese cloth, being careful to remove all the casein. Serve cold, with or without sweetening, and flavor as desired.

LEMON WHEY

See Acid Drinks for recipe. Page 33.

WINE WHEY

See Acid Drinks for recipe. Page 33.

PANOPEPTON WITH WHEY

Put into a small teacup one or two teaspoonfuls of clean crushed ice; add one tablespoonful of Panopepton, stir, then fill the cup with whey. Drink slowly. This is very refreshing and nourishing—an admirable liquid food for fever patients and convalescents.

MILK PUNCH (RUM AND MILK)

1 cup milk.	2 teaspoons sugar.
1 tablespoon rum or brandy.	

Milk that has been heated and cooled or sterilized may be used. Shake all ingredients in fruit jar or tumbler until frothy.

MILK PUNCH (SHERRY OR BRANDY AND MILK)

1 cup fresh milk.	1 teaspoon sugar.
1 tablespoon brandy or ½ wineglass of sherry.	Nutmeg.

Milk that has been heated and cooled, or use sterilized milk and add the brandy and sugar; fill glass three-fourths full and add a grating of nutmeg on top.

CINNAMON AND MILK

1 cup new milk.	Sugar.
Stick cinnamon.	½ teaspoon brandy.

Boil milk, with sufficient cinnamon to flavor pleasantly, and sweeten. This may be taken cold with the brandy. Very good in cases of diarrhœa. Children may take it warm without brandy.

RICE MILK

1 ounce rice.	1 saltspoon salt.
1 pint scalded milk.	1 teaspoon sugar.

Soak rice twelve hours, strain and add the scalded milk, salt and sugar. Stir well and cook slowly one hour. Rub through a fine sieve (thin with more hot milk if desired). Taste and add more seasoning if necessary. Sago or tapioca may be used in the same way.

ACORN COCOA (FOR INFANTS)

Acorn Cocoa is a preparation made in Germany, and is bought in the shops. It is useful in cases of diarrhea and intestinal disease in which it is advisable to suspend the use of milk, and may be given for days. It contains fat, nitrogenous matter and tannic acid. A teaspoonful is dissolved in eight ounces of cold water. The preparation is given in the same manner as milk.—Koplik.

BEEF PREPARATIONS

BEEF JUICE—BEEF TEA—RAW BEEF

Beef Juice.—The juice of meat contains some protein in solution. It is absorbed in the rectum to nearly the same extent as complete peptones and is an excellent article of diet where solid foods cannot be given. One pound of meat yields about four ounces of juice.

From raw meat we cannot obtain as much juice as is easily taken from the same amount of meat when previously heated.

The reason for this is that the envelope enclosing the muscular tissue is a tough substance, which swells and dissolves when heated, yielding gelatine, and the liquid portion of the meat is easily expressed. If cooked too long the protein largely coagulates and the meat loses most of its moisture and becomes tough.

A steak thoroughly heated through swells, and when cut the liquid portion flows out readily.

In administering beef juice great care should be taken in reheating not to heat it above 136 degrees Fahrenheit, at which temperature albumin coagulates in flakes.

Beef juice, although fourteen times as rich in protein as beef tea, is raw in flavor, and is rejected by many palates. In such a case, add a small quantity of beef tea or prepared beef extract for flavor.

Thus by the union of two bodies, one rich in protein and the other rich in flavor, we have a superior food. Prepare a small quantity at a time, as it does not keep well.

Beef Tea.—Meat treated with hot water contains only a small percentage of solids and almost no protein except extractive matter. The clear liquid which remains when the coagulated albumin is strained out of beef tea contains only extractive or flavoring substances with the soluble mineral matter of the meat. Therefore it should not be strained, and if properly prepared the albumin will not be coagulated to so great an extent.

Even in strong beef tea which is carefully made the amount of proteids present has been found to be less than two per cent. Beef tea is valuable in the sick room not as a food, but as a flavoring; the liquid with the heat of the water acts as a stimulant.

Prepared extracts of good make may be used to advantage with beef juice.

A solution of white of egg flavored with meat extract makes a cheap and efficient substitute for beef juice.

BEEF JUICE

Select a piece of meat from the rump or upper part of the round. Broil or warm slightly one or two minutes, to set free the juices, then squeeze out the juice by means of a press, lemon squeezer or potato ricer into a slightly warmed cup. Salt if necessary, and serve at once. Prepare only enough to serve, as it does not keep well. Serve in dainty china cup to disguise color.

BEEF JUICE (FOR INFANTS)

This food is very useful in forms of diarrhœa and dysentery. A half pound or a pound of chopped lean meat is made into an oval, flat mass, placed on a broiler and slightly browned. The juice is then expressed with a small meat press, mixed with equal parts of barley water and salted to suit the taste.—Koplik.

BEEF ESSENCE

Put one-half pound round steak (freed from fat, etc.) through a meat chopper; put into small glass fruit jar with one tablespoon cold water. Place jar in a kettle of cold water, heat gradually and keep at temperature 150 degrees Fahrenheit (which is 62 degrees below the boiling point of water) for two hours. Strain and press the meat to obtain the juice. Season with salt. Serve in dainty china cup to disguise color.

Note.—A small piece of raw beef, broiled slightly, then cut up and added to above, gives a better flavor.

Liquid thus obtained should be red with albuminous juice in solution and not coagulated; it is nutritious, and may be kept in refrigerator twelve hours. Serve in small quantity slightly heated; or it may be made into beef tea by diluting with boiling water. Beef essence given ice cold is often grateful to a fever patient.

BEEF TEA

½ pound steak. **Salt.**
1 cup cold water.

Wipe steak, remove all fat and cut in small pieces. Add cold water and soak fifteen minutes. Put in a canning jar and cover; place on trivet in a kettle and surround with cold water. Allow water to heat slowly; do not have it reach a temperature higher than 150 degrees Fahrenheit. Cook two hours. Strain and season. In reheating be careful not to coagulate juices. If any fat is present, it may be removed by laying a piece of soft paper or bread on the top. Repeat if necessary.

BEEF TEA FROZEN

Beef tea may be frozen to the consistency of a water ice. Very grateful to a fever patient.

BEEF TEA WITH HYDROCHLORIC ACID

Select one-half pound of good beef; remove everything that is not clear meat. Chop it fine. Put in pint fruit jar and add one cup cold water and five drops *dilute hydrochloric acid.* Stir and set in refrigerator or any cold place for two hours to digest. Then strain, season with salt and serve in some dainty china cup on account of color. If one should object to color, heat the tea in a double boiler just till color changes. Do not strain. Beef tea made in this way is recommended by physicians for feeble children and patients much weakened by sickness.

ICED PANOPEPTON

To a small glass half-full of clean crushed ice add one tablespoonful of Panopepton; let it stand a moment and then sip slowly.

PANOPEPTON—HOT

To a small teacup two-thirds full of boiling water, add one tablespoonful of Panopepton, and one teaspoonful of *fresh* lemon juice—a little sugar, if desired—stir. Drink immediately, sipping slowly. This gives a pleasant sense of warmth when one is chilly, and is excellent in cases where light nourishment is required before retiring.

SCRAPED BEEF

Cut a piece of tender steak half an inch thick. Lay it on a meat board, and with a sharp knife scrape off the soft part until there is nothing left but the tough, stringy fibres. Season this pulp with salt, and pepper if allowed; make it into little flat, round cakes half an inch thick and broil them two minutes. Serve on rounds of buttered toast.

RAW BEEF SANDWICHES

Prepare meat as for scraped beef, and spread on bread cut very thin. Put slices on top, sandwich-fashion, and cut in fancy shapes. Serve in this manner or toast daintily.

BROTHS

Broth is a liquid containing the juices of soluble parts of meat and bone, which have been extracted by long, slow cooking.

This liquid is more or less solid when cold, according to the gelatinous nature of the ingredients. It varies greatly in quantity, according to the manner in which it is prepared and the material used. The cheaper, inferior parts of meat yield more nutriment than the expensive cuts.

The chief object in making broth is to obtain the largest possible amount of nutriment from the meat. This is best accomplished by observing the following rules:

Cut meat into small pieces.

Soak in cold water before heating.

Use a careful selection and proportion of meat, bone and water.

Season judiciously.

Use steam-tight kettle; simmer (not boil), that the juice may be retained and not wasted by evaporation.

Make it the day before using, that the fat may be removed more easily.

Long, slow cooking.

Broth may be made from beef, mutton or chicken. Rice, barley, etc., may be added, if allowed, to increase the quantity of nourishment.

Broth differs from beef tea in that it contains gelatin, which is obtained from meat and bones by long, slow cooking; and it is useful in convalescence, because the portion of the system in which gelatin is needed has been wasted.

MUTTON BROTH

Strong Broth	Weak Broth
2 pounds neck of mutton.	2 pounds neck of mutton.
1 cup cold water.	2 quarts cold water.
½ teaspoon salt.	1 teaspoon salt.
Speck pepper.	Speck pepper.

Wipe meat, remove skin and fat and cut into small pieces. Put in a kettle with bones, add cold water and let it stand one-half hour to extract the juices. Heat gradually to boiling point, season with salt and pepper and simmer two hours, or until meat is tender. Do not allow it to boil. Remove fat and strain through a coarse sieve. Serve hot. In reheating use double boiler. Three tablespoons of rice or barley may be added if desired. Soak barley over night, add to broth and cook until the grains are tender. If broth is made the day before it is used it can be cooled thoroughly and the fat be removed easily.

BEEF BROTH

Prepared same as Mutton Broth.

NUTRITIOUS BEEF BROTH

3 pounds solid meat from the shoulder or shin.
3 pounds bone from same.
4 quarts cold water.
2 teaspoons salt.

Take off the dried skin and any soft or bloody portion. Cut the meat into small pieces and put it with the cracked bone into an earthern jar. Cover with the cold water. Set in slow oven and cook from eight to twelve hours. Strain through a colander. Add salt to taste; cool quickly. When cold remove the fat. Serve cold as a jelly, or heat to about 170 degrees Fahrenheit, but do not heat above 180 degrees Fahrenheit, as boiling injures its value.

Note.—Reheat in double boiler; not direct heat, as it coagulates albumin. Can make one-third of recipe if desired.

BROTH WITH GRAINS

1 quart hot broth.
1 tablespoon rice or barley.

To the hot broth add the well-washed rice. Simmer slowly until the rice is tender, adding more broth if it evaporates. The broth should be strained before using.

CHICKEN BROTH

Thoroughly clean a two-pound fowl; remove skin and fat; separate at the joints and wipe with a wet cloth. Cover with two quarts of cold water. Heat very slowly and simmer three hours, or until meat is tender. When the meat has been cooking two hours add two ounces rice (and, if desired, a small onion). At the end of three hours remove the meat, season and serve. Unless it can stand over night to cool, skim off the fat when it first comes to a boil, and again after putting in the rice. Veal broth may be made in the same way.

Note.—Reheat in a double boiler. The rice may be omitted if desired.

CLAM BROTH

½ cup Burnham's Clam Bouillon.
1 cup water or milk.
Pepper.
¼ teaspoon butter.

Blend the clam bouillon and water (or milk), and heat to the boiling point. Season with salt to taste, and if allowed, a little pepper and the butter. Serve hot in dainty cups.

CLAM BROTH NO. II

Take five clams, wash and scrub well and put in saucepan with cold water to cover. Cook until shells open, remove from pan and take out clams. Chop and put them back into broth. Cook fifteen minutes. Strain through muslin; serve hot. If too strong flavor, add hot water.

Note.—If made in large quantity, use two or three clams to one cup water.

This broth may be frozen to the consistency of a frappé.

EGG BROTH

If one cannot conveniently get protein from meat, a very nutritious broth may be made by means of hot water into which an egg has been stirred. Heat three tablespoons of water to not above 149 degrees Fahrenheit (below the simmering point), and stir into it a raw egg. The liquid is milky if the yolk is used; clear if only the white is used. It has little taste, which is an advantage with many patients; or it may be flavored with beef extract.

Liquid at a temperature of 149 degrees Fahrenheit is liable to burn the tongue—cold egg lowers the temperature. One hundred and forty degrees is as hot as one can drink a liquid, and 122 degrees Fahrenheit is a very comfortable temperature.

EGG BROTH NO. II

1 cup hot beef broth.
1 egg.
½ teaspoon salt.

Beat the white and yolk of egg separately. To the yolk add gradually the hot broth, stirring continually. Add the salt and fold in the well-beaten white. Reheat and serve very hot.

BEVERAGES

The effect of tea, coffee and cocoa on the salivary and peptic digestion, according to Sir William Roberts, is as follows:

Salivary Digestion.—Coffee and cocoa have only slight effect on salivary digestion, but tea, even a very minute proportion, has a retarding effect, which is due to the large quantity of tannin contained in the tea-leaf. Tannin is one of the most soluble substances known; it melts like sugar in hot water. If you wish to avoid the retarding effect of tea on salivary digestion, direct the patient not to sip the beverage with the meal, but to eat first and drink afterward; in this way time is given for the saliva to perform its intended functions.

Black and green tea are produced from the same plant, but by different methods. They contain about the same quantity of the active principle—caffeine or theine—and of tannin, but differ in the amount of volatile oil. The two kinds are also used mixed. If tea is made by pouring boiling water on the leaves and served for drinking in a few minutes but little tannin enters the decoction. Green or mixed tea is more powerful than black tea, and is responsible for most of the cases of nervousness ascribed to tea.

"When tea is steeped for a long time, and drunk freely the presence of the tannin may cause dyspepsia.

The difference between the action of tea and coffee is not due to any difference in active principles, but to the difference in volatile oils." (Brunton.)

The exhilarating and staying powers of tea are due to the theine and tannin it contains; the theine exhilarates the nervous system, and the tannin stays hunger. Tea is less likely to cause sleeplessness if lemon juice is substituted for milk.

Peptic Digestion.—The effects of tea, coffee and cocoa on peptic digestion from the infusion of equal strengths are nearly alike. They all exercise a retarding effect and should be taken very moderately by persons of weak digestion. Coffee, like tea, contains three active principles. These are the alkaloid caffeine, which is identical with and has the same properties as theine in tea; secondly, an astringent substance resembling tannin, but present in much smaller quantities than in tea; and, thirdly, a volatile oil developed in roasting, which gives the coffee its aromatic odor. Coffee, like tea, also contains a considerable amount of gluten, which is only slightly soluble in water.

Coffee is valuable as a cardiac stimulant for adults and used to dilute raw milk and as a flavor.

Coffee or tea taken with either milk or sugar alone is much more healthful and less likely to cause ill effects than when both are used.

Frequently after operation freshly made black coffee or tea without milk or sugar will be retained, and in some cases check vomiting. Give the patient one-half teaspoonful at frequent intervals.

Chocolate and cocoa contain in compact form a highly nutritious food of great palatability, which is quickly appropriated as a repairer of tissue waste. It contains in good proportion all the elements necessary to nourish the body.

About fifty per cent. of pure chocolate consists of fat and is easily digested and assimilated as food by those able to take fat. Cocoa is chocolate with the excess of fat removed. It is nourishing, and not only valuable for its own nutriment, but for the large amount of milk added to it, and is especially useful in the diet of the child and of the sick.

The best flavor to add to chocolate is vanilla, next to that cinnamon. Caution must be used not to spoil the fine flavor of the bean. About eleven per cent. of the chocolate bean is starch, and both chocolate and cocoa are of a much finer flavor if boiled for a few moments.

Cocoa Shells make a delicate drink but contain little nourishment. They can be taken by those of weak digestion.

TEA

1½ teaspoons tea.	**1 cup boiling water.**

Scald the teapot, which should be silver, crockery or granite ware, not tin. Put into it the tea, add the freshly boiling water and let it infuse five minutes. By no means allow it to boil, for boiling dissipates the aroma and extracts the tannin.

RUSSIAN TEA

Heat cup, fill three-fourths full of boiling water and dip in it two teaspoons tea (put in tea-ball or fine strainer), until strong enough. Serve hot with sugar and a slice of lemon.

Note.—Lemon is a good substitute for milk. The lemon prevents the headache and sleeplessness which the milk in tea causes to some persons.

BOILED COFFEE

(To make seven cups of coffee.)

1 cup coffee.	**6 cups boiling water.**
½ egg and shell.	**1 cup cold water.**

Scald coffee pot. Wash egg, beat slightly and add crushed shell, coffee and one-half cup cold water. Put into scalded coffee pot, add boiling water and let boil up three times, stirring down after each time (or boil five minutes); then add one-half cup cold water. Keep hot twenty minutes. Serve in hot coffee cups with cream and sugar, or hot milk may be used in place of cream.

Note.—A favorite blend of coffee is three parts Java and one part Mocha.

BOILED COFFEE

(Individual Rule.)

2 tablespoons coffee.
1 egg shell.
¾ cup boiling water.
¼ cup cold water.

Follow general directions for blending in preceding recipe.

For the Diabetic.—The following varieties may be used. Pour coffee into a slightly beaten egg or yolk; or one teaspoon butter; or heavy cream. Substitute Sweetina for sugar.

FILTERED COFFEE

(Individual Rule.)

2 teaspoons finely ground coffee.
¾ cup boiling water.

Place a piece of filter paper over a strainer and put the coffee in it. Hold the strainer over a hot coffee cup and pour the boiling water slowly over the coffee.

FILTERED COFFEE NO. II

2 teaspoons coffee.
1 cup boiling water.

Grind the coffee very fine, put it into the upper part of a double coffee pot and pour the boiling water through it. Let it stand a few minutes on the back of the stove, where it will not boil. Then remove it and serve hot.

MALTED MILK COFFEE

1 tablespoon Horlick's Malted Milk.
1 tablespoon ground coffee.
¾ cup boiling water.
Sugar.

Mix the malted milk powder, coffee and water, stirring well. Boil three minutes. Add sugar if desired.

Or one to four teaspoons of malted milk powder may be put in a cup and ordinary coffee poured directly upon it, stirring constantly.

CEREAL COFFEE

3 tablespoons cereal coffee.
1 pint cold water.
¼ teaspoon butter.

Put the cereal into coffee pot; add cold water when it reaches the boiling point, boil twenty minutes to thirty minutes. Serve with sugar and hot milk or cream.

Note.—As cereal coffee is made of browned grain, it is a wholesome drink, and is not stimulating.

BREAKFAST COCOA

(To make six cups of cocoa.)

3 tablespoons Walter Baker's cocoa.
4 tablespoons sugar.
1 cup boiling water.
3 cups milk.

Scald milk in double boiler. Put the cocoa and sugar in a saucepan and slowly pour on the hot water, stirring all the time. Boil five minutes, add the scalded milk, beat until foamy with Dover egg beater and serve in heated cups. One-half cup of cream is a great addition to cocoa.

BREAKFAST COCOA

(Individual Rule.)

¾ tablespoon Walter Baker's cocoa.
1 tablespoon sugar.
½ cup boiling water.
½ cup milk.

Follow general directions for blending and cooking in preceding recipe.

Note.—Whipped cream may be served with cocoa. One-third teaspoon of brandy may be added if ordered by physician.

MALTED MILK COCOA

1 tablespoon Horlick's Malted Milk.
1 teaspoon cocoa.
¾ cup boiling water.
Sugar.

Mix the malted milk powder, cocoa and water, stirring well. Boil three minutes. Add sugar if desired and serve hot.

PLAIN CHOCOLATE

1 quart milk.
2 ounces Walter Baker's chocolate.
2 tablespoons boiling water.
½ tablespoon cornstarch.
3 tablespoons sugar.
Speck salt.

Mix the cornstarch with one-fourth cup of the milk. Put remainder of milk in double boiler to heat. When the milk is scalded, stir in the cornstarch and cook ten minutes. Scrape the chocolate and put it in a small saucepan; add sugar and water and place the saucepan over hot water. Stir constantly until the mixture is smooth and glossy. Add the hot milk and beat the mixture with egg beater until frothy; or it may be poured back and forth from the boiler to a pitcher, holding high the vessel from which it is poured. This will give a thick froth. Serve at once.

Note.—If the chocolate is preferred not thick, omit starch.

Whipped cream may be served with chocolate, or it may be poured on to the beaten yolk of egg.

If desired, flavor with one-half teaspoon vanilla.

PLAIN CHOCOLATE

(Individual Rule.)

1 cup milk.
½ ounce chocolate.
⅛ tablespoon cornstarch.
¾ tablespoon sugar.

Follow directions for blending and cooking in preceding recipe.

CHOCOLATE, VIENNA STYLE

1 quart milk.
4 ounces Walter Baker's vanilla chocolate.
3 tablespoons boiling water.
1 tablespoon sugar.

Scald milk in double boiler. Scrape chocolate and put sugar and water into a small saucepan; heat over hot water, stirring till smooth and glossy. Stir this mixture into the hot milk and beat well with an egg-beater. Serve at once, putting a tablespoon of whipped cream in each cup, and filling with the chocolate.

The plain chocolate may be used instead of the vanilla, but in that case use one teaspoon vanilla and three generous tablespoons sugar.

SOUP AND SOUP ACCOMPANIMENTS

Soup is a light and suitable form of food for the sick. There are two classes—those made with meat and those without meat.

The soups with meat are an infusion of meat, flavored with salt and some condiment. They are treated in the chapter on broths.

The foundations of soups without meat are milk, vegetables and water. They are dainty and nutritious, and an excellent way of serving milk and the starch and mineral matter of the vegetable.

They may be served as a luncheon, with crisp crackers, or as the first course of a dinner. Serve daintily in heated bouillon cups, partly filled, on small plate and doily.

General rule for blending:

(*a*) Prepare vegetables, cook and strain.

(*b*) Prepare cream sauce: Melt butter, add the flour and gradually pour on the scalded milk or water. Cook thoroughly.

(*c*) Blend (*a*) and (*b*). Season, strain and serve immediately.

In the preparation of these soups great care must be taken that the starch of the vegetable and of the flour used in the thickening is thoroughly cooked. Cooking temperature of starch is 212 degrees Fahrenheit.

CREAM OF CELERY SOUP

½ cup celery.
1 cup boiling water.
Salt.
Pepper.
1 tablespoon butter.
1 tablespoon flour.
1 cup rich milk.
1 slice onion.

(*a*) Wash and scrape the celery and cut into small pieces, add the water and cook until very tender and soft. Renew the water if it boils away. Mash the celery in the water in which it was cooked.

(*b*) Scald milk. Melt the butter in a saucepan, add flour and pour on gradually the scalded milk. Cook thoroughly, stirring carefully.

Blend (*a*) and (*b*); season to taste; strain and serve immediately with croûtons or crisped crackers.

Note.—For individual quantity use one-half recipe.

CELERY SOUP (GUM GLUTEN)

1½ cups stock.
6 stalks celery.
1 slice onion.
Speck cayenne pepper, salt.
½ teaspoon butter.
½ teaspoon Gum Gluten Ground.

Cook celery and onion in the stock; mash and strain. Melt the butter, add the flour and pour on gradually the stock; season and cook thoroughly.

CREAM OF CELERY SOUP (GUM GLUTEN)

6 stalks celery.
1 slice onion.
1 cup water.
1 cup hot milk.
Speck cayenne pepper, salt.
½ teaspoon butter.
½ teaspoon Gum Gluten Ground.

Boil, mash and strain the first three ingredients, add the hot milk or cream. Melt the butter, add the flour and pour on gradually the hot soup stock; season and cook thoroughly.

CORN SOUP

½ cup corn.
1 cup cold water.
¼ slice onion.
Salt.
Pepper.
2 cups milk.
1 tablespoon flour.
1 tablespoon butter.
Yolk 1 egg.

(*a*) Chop corn, add water and simmer twenty minutes; rub through a sieve.

(*b*) Scald milk with onion; remove onion. Melt butter, add flour and gradually pour on milk.

Blend (*a*) and (*b*); cook thoroughly, season to taste with salt and pepper and pour onto the beaten yolk. When well blended, serve hot.

Note.—The yolk of egg may be omitted.

For individual quantity use one-half recipe.

ASPARAGUS SOUP

- ½ bundle asparagus.
- 2 cups milk.
- 1 tablespoon butter.
- 1½ tablespoons flour.
- Salt.
- Pepper.

(*a*) Wash the asparagus and cook in boiling salted water, boiling gently thirty minutes. Take from the water, cut off the tips and put them into the soup tureen; press the remainder through a colander.

(*b*) Scald the milk. Melt the butter, add the flour and pour on gradually the scalding milk. Cook thoroughly, stirring often.

Blend (*a*) and (*b*); season to taste, strain over tips and serve at once with crisped wafer crackers.

Note.—For individual quantity use one-half recipe.

ASPARAGUS SOUP (GUM GLUTEN)

One-half pint of veal stock or water, boiled with five or six stalks of asparagus. Reserve tips; mash and strain. Melt together one-half teaspoonful of butter with one half teaspoonful of Gum Gluten Ground. Add stock and asparagus tip, and serve at once.

TOMATO SOUP (WITH BROTH)

- 1 cup strained tomatoes.
- 1 tablespoon butter.
- 1 slice onion.
- 2 tablespoons flour.
- 1 pint water or stock.
- ½ teaspoon salt.
- Speck pepper.

(*a*) Cook and strain tomatoes, obtaining one cup juice.

(*b*) Melt butter, add the onion and brown slightly; add the flour; pour on gradually the boiling water or stock.

Blend (*a*) and (*b*); cook thoroughly, season with salt and pepper, strain and serve.

Note.—Two tablespoons of cream may be added.

Beef or mutton broth strained may be used in place of water if desired.

For individual quantity use one-half recipe.

TOMATO SOUP (GUM GLUTEN)

1 cup stock.
½ cup tomatoes.
1 slice onion.
½ teaspoon butter.
½ teaspoon Gum Gluten Ground.
Salt, pepper.

Boil and strain the first three ingredients. Melt the butter, add the flour and pour in gradually the stock. Cook thoroughly; season. This may be improved by the addition of Sweetina, clove, bayleaf, or any preferred seasoning.

CREAM OF TOMATO SOUP (GUM GLUTEN)

½ cup tomatoes.
1 slice onion.
1 cup milk.
½ teaspoon butter.
½ teaspoon Gum Gluten Ground.
Salt, pepper.

Stew and strain the tomatoes and onion, reheat and add a tiny pinch of soda. When effervescing subsides add milk. Melt the butter, add the flour and pour in gradually the hot stock. Season and cook thoroughly.

MOCK BISQUE SOUP

1 cup tomatoes.
¼ saltspoon soda.
Salt and pepper.
2 cups milk.
2 tablespoons butter.
1½ tablespoons flour or cornstarch.

(*a*) Steam tomatoes until soft enough to strain juice; strain, add soda and allow gases to pass off. This prevents the acid of the tomato curdling the milk.

(*b*) Scald milk; melt butter in quart size saucepan, add the flour and pour on gradually the scalding milk. Cook thoroughly, stirring carefully.

Blend (*a*) and (*b*); season to taste, strain and serve immediately with croûtons or crackers.

Note.—For individual quantity use one-half recipe.

GREEN PEA SOUP

½ can peas.	**1 cup milk.**
1 teaspoon sugar.	**½ slice onion.**
1 cup cold water.	**1 tablespoon butter.**
Salt and pepper.	**1 tablespoon flour.**

(*a*) Drain peas from their liquor, add sugar and cold water and simmer twenty minutes. Rub through a sieve; reheat.

(*b*) Scald milk with onion and remove onion. Melt butter, add flour and pour on gradually the scalding milk. Cook thoroughly, stirring carefully.

Blend (*a*) and (*b*); season to taste; serve hot.

Note.—Peas that are too old to serve as a vegetable may be used for soup.

ONION SOUP (GUM GLUTEN)

One Bermuda or three green onions boiled until tender in stock or water; mash and strain. Add one-half teaspoonful Gum Gluten Ground, one-half teaspoonful butter and a little chopped parsley. One tablespoon of cream, if liked.

RICE SOUP

2½ tablespoons rice.	**Stalk celery.**
2 cups milk.	**¼ bay leaf.**
1½ tablespoons butter.	**Salt.**
¼ small onion.	**Pepper.**

Scald the milk, add the well-washed rice and cook in double boiler thirty minutes, covered closely.

Melt butter in sauté pan, add the sliced onion and cook till tender, but not brown. Add celery sliced, and turn into scalded milk; add the bay leaf, cover and let stand on back of stove fifteen minutes. Strain, season with salt and pepper, reheat and serve.

Note.—If soup is too thick, add a little heated milk. For individual quantity use one-half recipe.

VICTORIA SOUP (WITH BROTH)

½ cup lean chicken meat.
1 cup strong chicken broth.
½ teaspoon salt.
Pepper.
1 cup rich milk.
¼ cup cracker crumbs.
Yolks 2 eggs.

Soak the crumbs in a little of the milk. Cook yolks of eggs in hot water until hard. Chop the chicken, mix with the soaked cracker crumbs, press the hard-cooked yolks through a coarse strainer, add the seasonings and the broth and cook all together five minutes over direct heat or one-half hour in double boiler. Serve hot.

CONSOMME

Make a beef or any broth according to the strength required. While cooking skim frequently, and when reduced to one-third of its quantity take from saucepan and strain; season well, cool quickly and remove fat. Return to saucepan, add a few thin slices of onion and one-half pound of lean beef chopped fine and clear. To each quart of stock add the slightly beaten white and broken shell of one egg and a few shavings of lemon rind. Place on front of range, and stir constantly until boiling point is reached; boil two minutes. Set back where it may simmer twenty minutes; remove scum and strain through double thickness of cheese cloth.

PANOPEPTON BOUILLON—HOT

Put one tablespoonful of Panopepton into a small teacup; fill the cup nearly full of boiling water, and flavor to taste with celery salt, or plain salt and pepper; stir, and sip slowly. This is a very nourishing and pleasantly stimulating drink.

OYSTER SOUP

See chapter "Oysters" for recipe. Page 109.

CLAM SOUP

See chapter "Clams" for recipe. Page 112.

CLAM BOUILLON

See chapter "Clams," page 112.

CLAM BOUILLON BISQUE

See chapter "Clams," page 113.

MEAT SOUPS

Foundation for same, see chapter on Broths. Page 68.

FRUIT SOUP

See chapter "Starchy Drinks" for recipe. Page 47.

SOUP ACCOMPANIMENTS

GUM GLUTEN NOODLES FOR SOUP

1 egg.	1 saltspoon salt.
1 teaspoon milk.	Gum Gluten Ground.

Beat the egg very light, add the milk, salt and Gum Gluten to make a stiff dough. Roll very thin and cut in straws. Cook in any soup. Hoyt's Gluten Macaroni adds flavor and nourishment to soup.

GUM GLUTEN CRISP

See chapter " Toast " for recipe. Page 103.

CRISPED CRACKERS

Split common crackers or use saltines. Put in pan and bake until thoroughly heated. Serve plain or butter slightly.

TOASTED CRACKERS

Butter crackers, put in pan and bake until a delicate brown. Serve on small plate with doily.

CROUTONS

Take a slice of stale bread about half an inch thick, cut into half-inch cubes; put them in a shallow pan and dry thoroughly, then brown delicately. Stir often to brown evenly. Serve on small plate with doily. A little butter may be spread on the bread if desired.

CEREALS

GRUELS—PORRIDGES—BREAKFAST FOODS

The cereals or grains contain a large amount of starch, together with gluten, water, some mineral matter and a little sugar and fat.

The outer covering of each seed or grain is of cellulose. The amount of water in cereals is so small that liquid must always be added in cooking. Long cooking in water at a high temperature—212 degrees Fahrenheit—softens the cellulose and breaks open the starch grains, partially changing the starch into a kind of sugar called dextrin, which renders the cereals a very digestible and nutritious food.

Gruels are cooked mixtures of flour and grains with water or water and milk. The milk should not be added until the gruel is thoroughly cooked, so that the composition of the milk is not injured.

Time for cooking should be conscientiously kept by the clock, as the largest ingredient of the grain is starch, which is not easily digested unless well cooked.

Should the water evaporate in the cooking, add hot water, or else before serving dilute with heated milk. A very little sugar may be added, but salt alone is usually preferred. As they lack color, it is desirable to serve gruels in dainty hued china. Pass on small tray or plate with doily, and serve with crisped cracker or toasted bread.

Gruels should be taken slowly, in order that the starch, which is partially digested by the action of the saliva, may be thoroughly mixed with it before it is swallowed. All starches thoroughly cooked require about the same time for digestion.

In making gruels of oatmeal, whole wheat, rice or Indian meal, the cereal when possible should be boiled steadily all day until it becomes a jelly. No cereal cooked in double boiler is ever over done. In using, take a little of the jellied cereal, thin with milk or cream; then heat, season and strain.

Breakfast Food is meal or grain cooked in water to the consistency of a rather thin pudding; when possible and desirable serve with fruits.

GRUELS

FLOUR GRUEL

1 cup milk.
½ tablespoon flour.
Speck salt.
1 dozen raisins.

Scald the milk. Mix the flour with a little cold milk and stir into the scalding milk. Cook in a double boiler one-half hour or on back of stove in a saucepan.

Stone and quarter the raisins, then add water enough to cover; cook slowly until water has all boiled away. Add to gruel just before serving. Add salt. Strain and serve, or it may be eaten with the raisins in it.

Note.—This gruel may be made without the raisins. Never use raisins in bowel troubles.

GUM GLUTEN GRUEL OR PORRIDGE

1 tablespoon Gum Gluten Ground.
2 tablespoons cold water.
1 pint hot water or milk.
Salt.

Add cold water slowly to Gluten Flour to form a thin paste, then add gradually to boiling water, while stirring constantly; cook fifteen minutes. Season with salt. Is an excellent food for the sick; for baby food it may be sweetened.

CRACKER GRUEL

4 tablespoons very fine and sifted cracker crumbs.
1 scant teaspoon sugar.
1 scant saltspoon salt.
1 cup boiling water.
1 cup boiling milk.

Mix salt and sugar with crumbs. Pour on the boiling water; put in the milk and boil for two minutes. Do not strain.

Note.—Omit sugar if desired.

BARLEY GRUEL

2 tablespoons barley flour.
1 quart scalded milk.
Salt.

Blend the barley flour with a little cold milk and stir into the scalding milk. Cook in double boiler two hours. Season with salt to taste, and add sugar if desired. Strain.

BARLEY GRUEL OR JELLY

1 tablespoon barley flour.
2 tablespoons cold water.
1 cup boiling water.
½ cup milk (if desired).
¼ teaspoon salt.

Blend carefully the barley flour and the cold water; add gradually to the boiling water and cook twenty minutes in double boiler. Add milk and salt, reheat, and strain.

Wheat or oat gruel may be made in same way, using the prepared flour for the purpose.

BARLEY GRUEL (WITH BROTH)

2 cups beef broth.
2 tablespoons barley flour.
2 tablespoons cold water.
1 saltspoon salt.

Mix barley flour and salt with the cold water to form a smooth paste. Add gradually to the boiling stock and boil one-half hour. Strain and serve very hot.

EGG AND SHERRY GRUEL

1 egg.
1 wineglass sherry.
1 teaspoon lemon juice.
1 tablespoon sugar.
Grating nutmeg.
1 cup smooth hot gruel.

Beat the egg; add wine, lemon, nutmeg and pour on the hot gruel.

ARROWROOT GRUEL

2 teaspoons arrowroot.
2 tablespoons cold water.
1 cup boiling water or milk.
Salt.
Sugar, lemon juice, wine or brandy as required.

Blend the arrowroot and cold water to a smooth paste. Add to the boiling water or milk. Cook in double boiler two hours. Add salt. Strain and serve hot.

Arrowroot is the purest form of starch, and beneficial in case of diarrhœa.

ARROWROOT GRUEL NO. II

2 tablespoons arrowroot.	2 tablespoons cold water.
1 teaspoon sugar.	1 cup boiling water.
1 saltspoon salt.	2 cups scalded milk.

Mix arrowroot, sugar, salt and cold water to a smooth paste. Add to the boiling water, stirring constantly. Boil twenty minutes; add the scalded milk and bring to the boiling point.

Note.—This is good in case of diarrhœa if not given too hot. A tablespoon brandy may be added if ordered.

PEPTONISED MILK GRUEL

Thick, well boiled, hot gruel, ½ pint.	Milk, fresh, cold, ½ pint.

Mix and *strain* into a small pitcher or jar, and immediately add the contents of one Fairchild Peptonising Tube, mix well. Let it stand in the hot water bath, or warm place, for 5 minutes, then put in a clean bottle and place on ice. Serve hot or cold.

Gruel made from arrowroot, flour, barley, oatmeal, etc., will serve for the purpose. In each instance the farinaceous material should be boiled with water until the starch granules have been thoroughly swollen, broken up and incorporated with the water.

INDIAN MEAL GRUEL

1 tablespoon Indian meal.	2 tablespoons cold water.
½ tablespoon flour.	1½ cups boiling water.
¼ teaspoon salt.	Milk or cream.

Blend the meal, flour and salt with the cold water to make a smooth paste, and stir into the boiling water. Boil on back of stove one hour and a half. Dilute with milk or cream. Strain.

RICE GRUEL

1 tablespoon rice flour.	1 quart boiling water.
2 tablespoons cold water.	Salt.

Mix the rice flour with a little cold water to form a smooth paste. Add to the boiling water, and cook in double boiler until transparent and thoroughly cooked. Add salt to taste. Sweeten, and add milk if desired. Strain.

OATMEAL GRUEL NO. I

½ cup coarse oatmeal.	Salt.
Water.	Milk.

Pound the oatmeal in a mortar until it is mealy, then put it into a tumbler and fill it with cold water. Stir, and pour off the mealy water into a saucepan. Fill tumbler again, stir and pour off, and repeat as long as the water looks mealy. Set saucepan on back of stove, and let simmer at least one hour, or cook in double boiler two hours. Strain, season with salt and serve. Thin with milk or cream if too thick.

OATMEAL GRUEL NO. II

¼ cup coarse oatmeal.	1½ cup boiling water.
½ teaspoon salt.	Milk or cream.

Add oatmeal and salt to the boiling water, and cook four to five hours in a double boiler, adding more water if necessary. Strain and dilute with hot milk to make it of the right consistency. Reheat and serve.

Note.—Sugar, and a little port wine may be added if allowed and desired.

FARINA GRUEL

1 tablespoon farina.	1 cup scalded milk.
1 tablespoon cold water.	Salt.
1 cup boiling water.	

Mix the farina with the cold water, add to the boiling water and boil thirty minutes. Add the scalding milk. Taste and season properly. A little sugar may be added if desired, or an egg may be beaten and the gruel added to it.

CAUDLE

½ cup Scotch oatmeal.	Juice 1 lemon.
4 quarts water.	Sugar, cinnamon, brandy, or wine.
Salt to taste.	
1 cup raisins.	

Boil oatmeal, water and salt four or five hours. Strain; if too thick add a little hot water and whip it with a wooden spoon. Remove seeds from raisins, cook a short time in hot water, and add raisins and water to above. Add lemon juice, and sugar, cinnamon, brandy or wine to taste.

BOILED OR BROWNED FLOUR GRUEL (FOR CHILDREN TEETHING)

Tie a quarter of a pound of wheat flour in a thick cloth, and boil it in one quart of water for three hours; remove the cloth and expose the flour to the air, or heat until it is hard. Grate from it when wanted, one tablespoonful, put into half a pint of new milk, and stir over the fire until it comes to a boil; add a pinch of salt and a tablespoon of cold water, and serve. This gruel is excellent for children afflicted with summer complaint. Or brown a tablespoon of flour in the oven, or on top of the stove in a baking tin; feed a few pinches at a time to a child, and it will often check diarrhœa.

BREAKFAST FOODS

Fruits served with breakfast foods make them more appetizing.

GUM GLUTEN BREAKFAST FOOD

½ cup Gum Gluten Breakfast Food.	**2 cups cold water.**
	Salt.

Would suggest partly cooking the Breakfast Food the day before using, as a long cooking improves the quality. Put the food in the water and cook over direct heat for fifteen minutes, then put in double boiler and cook for about one hour, adding salt to taste when nearly done. It is then necessary to cook it but twenty minutes in the morning. Serve with cream.

HASTY PUDDING OR CORNMEAL MUSH

1 scant cup cornmeal.	**1 cup cold milk or water.**
2 tablespoons flour.	**2 cups boiling water.**
1 teaspoon salt.	

Mix the meal, flour and salt with the cold milk or water; when smooth, stir into the boiling water. Cook in a double boiler one hour or more; or over direct heat one-half hour. Serve with cream and sugar, or turn into tins to cool if wanted for sautéing. Cut into slices, dip in flour and sauté in drippings or butter.

CORNMEAL MUSH

(Individual Rule.)

¼ cup cornmeal.	**¼ teaspoon salt.**
½ tablespoon flour.	**½ cup boiling water.**
¼ cup cold water or milk.	

Blend and prepare according to directions in preceding recipe,

HOMINY MUSH

¼ cup fine hominy.
¼ teaspoon salt.
1⅓ cups boiling water.

Put all together in a double boiler and cook three hours. Add more water if mush seems stiff and thick; all preparations of corn absorb a great deal of water in cooking, and hominy usually needs a little more than four times its bulk.

Note.—Hominy is exceedingly indigestible unless well cooked, but sweet and nutritious when subjected to a high temperature for a long time.

OATMEAL MUSH FOR CHILDREN AND INVALIDS

1 cup granulated oatmeal.
1 teaspoon salt.
1 scant quart boiling water.

Put the oatmeal and salt in a double boiler, pour on the boiling water and cook three or four hours. Remove the cover just before serving, and stir with a fork to let the steam escape. If the water in the lower boiler be strongly salted, the oatmeal will cook more quickly. Serve with sugar or salt and cream or milk.

Note.—Baked sour apples, apple sauce and apple jelly are delicious eaten with oatmeal. They should be served with the mush, and sugar and cream poured over the whole. They give the acid flavor which so many crave in the morning. Coarse oatmeal is not advisable in any form of water brash, acidity or bowel irritations. It often causes eruptions on the skin in warm weather.

ROLLED OATS

½ cup rolled oats.
1⅓ cups boiling water.
¼ teaspoon salt.

Mix ingredients and cook in double boiler one-half hour. Serve with sugar and cream.

STEAMED RICE

⅓ cup rice.	**1 cup boiling water.**
⅓ teaspoon salt.	

Pick over the rice and wash in three or four waters. Put it with the salt and boiling water in upper part of double boiler. Cook over boiling water. Do not stir while cooking. Steam one hour, or until the grains are tender. Serve as a cereal with sugar and cream. A few dates cut in narrow strips may be added just before serving if desired.

BOILED RICE

2 tablespoons rice.	**½ teaspoon salt.**
2 cups boiling water.	

Wash rice thoroughly and add gradually to the boiling salted water, care being taken that the water does not stop boiling. Cover and cook twenty minutes, or until grains are soft. Turn into a strainer and drain, put in oven a few moments to dry, with oven door open. Serve with sugar and cream.

Note.—Add more boiling water if needed. Keep well covered while cooking.

CRUSHED BARLEY MUSH

2 cups boiling water.	**Salt.**
¼ cup crushed barley.	

Blend; cook twenty minutes in a double boiler.

FRUITS

Fruits are a part of the food of man, and in some areas are a very large dietary factor. Their variety is great and their value important.

They furnish nutriment, convey water to the system, give variety to the diet, and are valuable for their medicinal qualities, as they act both as a tonic and purifier of the blood. The expurgative fluid reaches every part of the system rinsing out morbid humors and restoring congestive organs to a healthy state of functional activity.

Over-ripe or unripe fruit should not be eaten, but sound, ripe fruit is wholesome and good. All fruits contain levulose sugar, and usually some acid in varied proportions. They all contain alkaline salts, which are good for the blood. The influence of the alkalies is shown in a decisive manner in the effect produced on the salts of organic acid in the circulation. It has long been observed that after eating juicy fruits, cherries, strawberries, apples, etc., the urine becomes alkaline. All fruits, as well as edible roots, tubers and green vegetables, contain these alkalies in the form of salts of the organic acids; usually as malates (all kernel fruit, pineapple), citrates (stone fruits, currants), tartrates (grapes).—Liebig.

The effect of such fruits on the uric acid is apparent and obvious. If gouty persons would learn to eat fruit and teach children to do so, it would save much resorting to medicine in later days.

It is important to those who are obliged to exclude sugar from their dietary to know that the fruits containing the least sugar are the plum peach, apricot, and raspberry. Those containing the largest amounts are the apple, sweet cherry, grape, and pears.

The apple exerts a most excellent influence upon the liver and kidneys, and is valuable in cases of acidity of the stomach.

The fresh pineapple juice contains a remarkable active digestive principle, similar to pepsin, termed bromelin, and so powerful is its action upon proteids that it will digest as much as one thousand times its weight within a few hours.

Figs and prunes are valuable for inactivity of the liver and most excellent laxatives.

The banana contains a large amount of starch, as much as the potato, therefore should not be eaten in an unripe state.

Before serving, all fruit should be washed to avoid germs. Digestive disturbances are most often caused by these germs, not by the fruit.

ORANGE SUNFLOWER

Wash the orange. Put a three-tined fork into the stem end. Cut off each end down to pulp, leaving the stem end on fork, then pare off rind to pulp, cut out each section and place on small plate in sunflower fashion, the pieces of pulp for petals; fill centre with granulated sugar. Serve cold.

Note.—To cut nicely have a large, firm, cold orange and a sharp knife.

ORANGE NO. II

Select a large, firm orange; wash, cut and peel skin down in eight parts, leaving them connected to stem end of orange to form the petals, folding them under the pulp. Separate pulp in sections and put ice between petals before serving.

BAKED LEMON OR ORANGE

Bake a lemon or a sour orange in a moderate oven for twenty minutes. When done, open at one end and take out the inside. Sweeten with sugar or molasses. This is excellent for hoarseness and pressure on the lungs.

PINEAPPLE

To eat a slice of pineapple after a meal is quite in accordance with physiological indications, as pineapple juice contains a remarkable digestive principle similar to pepsin. It aids the work of digestion in the stomach, also in the intestinal tract.

BAKED BANANA

Raw, this fruit is often indigestible, but baked it acts as a stimulant to the nerves, being at once received and rapidly assimilated by the stomach. Cut bananas in halves; put in shallow pan; sprinkle with sugar and a little lemon juice and bake until soft.

Note.—The banana contains starch and should be thoroughly ripened before eating.

STEWED FIGS

½ pound figs.	1 cup cold water.
¼ cup white sugar.	Juice ½ lemon.

Wash figs. Dissolve sugar in the water; add figs and bring slowly to boiling point. Stew two and one-half hours; when tender, add lemon juice.

Note.—Cut figs in small pieces; cook very slowly so as not to add more water.

DATE BON BONS

Put salted almonds, or fourths of English walnuts into the inside of dates that have been cut open and stones removed. Roll in powdered sugar and serve.

STEAMED RHUBARB

1 cup rhubarb.	**¼ to ½ cup sugar.**

Wash the rhubarb and cut it into inch pieces without removing the skin, as this gives a pretty pink color to the juice. Put it into an agate double boiler without water and steam one-half hour, or until soft. Do not stir, as it breaks the pieces. Sweeten to taste at once on taking from fire. If rhubarb cooks a minute too long—which means after it has gone to pieces—it will lose its delicious flavor.

Rhubarb is rich in oxalic acid, which does much to tone the system.

BAKED APPLES

Wipe and core apples. Put in a shallow dish with one tablespoon water to each apple; more may be added during cooking if necessary, put into the centre of each apple two teaspoons sugar. Bake in a hot oven twenty to thirty minutes, or until soft; baste with the syrup every ten minutes. A little nutmeg may be added to the sugar, and a few drops of lemon juice to each apple. Care must be taken that apples do not lose their shape and break.

APPLES CUBAN STYLE

Pare and core sound, tart apples. Steam until almost tender; remove to a buttered pan; fill cavities with cocoanut, stick apples full of blanched almonds, baste with syrup made of sugar, water and lemon juice. Finish cooking in a hot oven, basting often. When serving, fill the cavities with jelly or the jellied juice.

STEWED APPLE SAUCE

Wash, pare, core and slice one apple; put in saucepan and add one teaspoon sugar and enough boiling water to partly cover. Cover and cook slowly without stirring until transparent and tender. Appetizing to serve with any breakfast food.

Pears and peaches may be cooked in the same way.

APRICOT AND PRUNE SAUCE

¼ cup prunes.	1 cup cold water.
¼ cup dried apricots.	Sugar to taste.

Wash fruit carefully; soak over night and cook slowly for two hours. If cooked properly the fruit will need very little sugar, as the sugar in the fruit is developed by this method of cooking.

STEWED PRUNES

Wash and look over the prunes, cover with clear cold water and allow to stand on the back of range over night. In the morning put the saucepan where they will cook slowly for four hours.

Note.—No sugar is needed as prunes are eighteen per cent. sugar, and by this manner of cooking are made very sweet. This simmering process renders them rich and juicy, while boiling toughens the skin. A little lemon juice is a pleasant addition.

Prunes are a valuable nutrient, and their use as a laxative is scarcely second to figs.

TOAST

In ordinary wheat bread, starch is the principal constituent. Starch when subjected to a high degree of heat is changed into an easily digested substance called dextrine.

In the ordinary cooking of a loaf of bread the starch, in the outer layer is changed into dextrine, which gives the crust its sweet flavor. Slices of bread toasted undergo a similar change.

Bread is toasted not merely to brown it, but to take out all the moisture possible, so that it may be more thoroughly moistened with the saliva, and thus easily digested; also the browning gives it a better flavor. The correct way to make toast is to use stale bread cut in uniform slices, and to dry it thoroughly before browning.

Toast prepared in this way, even if moistened with milk or water, may be easily and thoroughly acted upon by the digestive fluids.

To make toast over a gas stove, use an asbestos mat covered with a fine wire netting; have the netting side up, gas low at first to dry bread, then higher to brown delicately.

SIPPETS

Cut thin slices of bread, and from them make oblongs an inch wide by four inches long. Toast carefully so that they will not break, and pile on a small bread-plate with doily if they are to be served dry.

TOAST STICKS

Take a slice of fresh home-made bread (made without shortening), or French bread, cut five-eighths of an inch thick, remove crust and cut in narrow strips. Place on rack in pan, and dry and brown in a slow oven.

CROUTONS

See chapter "Soup Accompaniments" for recipe. Page 86.

GUM GLUTEN CRISP

Cut Gum Gluten Bread into thin slices, and dry in slow oven until the moistening is thoroughly evaporated, or the bread may be cut in cubes and slightly browned. Serve in soups or in milk.

WATER TOAST

Toast the bread. Dip quickly in boiling salted water (allowing one-half teaspoon salt to one cup water). Spread with butter. Serve on hot plate.

TOASTED CRACKERS

Toast oblong crackers daintily, and butter. Serve on plate with doily, piled log-cabin fashion.

MILK TOAST

Put a cup of rich milk in a saucepan and place it on the stove. While it is heating, toast three slices of bread to a delicate brown. Put them into a covered dish, and when the milk is scalding hot, season it with a saltspoon of salt, and pour it over the toast.

Note.—A little butter may be spread on each slice before the milk is added, but it is a more delicate dish without it.

CREAM TOAST

1 tablespoon butter.
1 tablespoon flour.
1 saltspoon salt.
1 cup milk.
3 small slices bread.

Scald the milk. Melt butter, add flour, remove from fire and add the milk gradually. Stir over heat constantly until smooth, cooking five minutes after blending, or until the starch is thoroughly cooked.

Toast: Remove crust if desired, cut in oblong pieces and toast. Serve on small platter with cream sauce poured over it, and garnish with toast points.

Note.—If you wish the toast very soft, it may be dipped very quickly in boiling salted water before adding the cream sauce.

CREAM TOAST NO. II

1 tablespoon butter.	2 tablespoons cold water.
1 tablespoon flour.	1 cup milk.
1 saltspoon salt.	3 slices toast.

Scald milk. Mix flour and salt and add the cold water gradually, making a smooth, thin paste. Add to scalded milk; cook in double boiler twenty minutes, stirring constantly until it thickens. Add butter. Pour over toast, and serve hot, on hot platter.

CELERY TOAST

Clean celery and cut into one-inch pieces; cover with boiling water and cook until tender; drain off water.

Prepare Cream Sauce in Cream Toast No. I; add cooked celery and pour on small slices of buttered toast. Garnish with toast points.

FRENCH TOAST (GUM GLUTEN)

½ cup milk.	Salt.
1 egg.	Gluten bread.

Beat the egg, add milk and salt; dip into this mixture slices of Gum Gluten bread. Sauté and brown in a little butter.

CLAM BOUILLON TOAST

Follow directions as for Milk or Cream Toast, adding sufficient Burnham's Clam Bouillon (to taste) to the Sauce, and pour over toast. Serve hot.

SHELL-FISH

OYSTERS—CLAMS

Oysters are a valuable food. Their nutritive value is not high, but they possess a delicate flavor that is acceptable to most palates, and are desirable for the salts which they contain.

The composition, according to Payen's analysis is as follows:

Nitrogenous matter	14	per cent.
Fat	15	per cent.
Saline substance	2.6	per cent.
Water	80.3	per cent.
Non-nitrogenous matter and waste	1.3	per cent.

Oysters are in season from September to May; during the rest of the year they are insipid and unfit for food.

The convalescent may be given fresh sound oysters, before solid animal food could be digested. Oysters may be used in a variety of ways; served raw or broiled slightly in the shell, are, however, the two most desirable ways, as in this manner they are more easily digested. In the later stages of convalescence stews and soups are recommended on account of their liquid form and warmth.

There are some points to be carefully observed in preparing oysters for the sick:

(*a.*) Make every effort to have the oyster alive when used, or as fresh as can be obtained from a reliable dealer. Many serious cases of illness and even death have been caused by eating oysters so long dead that poisonous substances had formed in them.

(*b.*) Oysters contain an albuminous substance which increases in hardness with an increase of temperature, just as the albumin of an egg does. When oysters are cooked with reference to this albuminous substance, they are also cooked in the best possible manner with reference to their other constituents; therefore subject them to a low temperature, for a short time, bearing in mind that 160 to 180 degrees Fahrenheit is the cooking temperature of albumin.

Glycogen is the form in which carbohydrate is present in oysters. It is contained in the liver. Its presence renders oysters an unsuitable food in cases of diabetes, in which a strict diet is being inforced.

Clams.—Clams are similar in composition to the oyster. They are much used for food and considered a great delicacy. They contain a tough portion that is not used in sick room cookery, but the clear juice on account of its digestibility and stimulating properties is invaluable in the sick room.

OYSTERS

RAW OYSTERS

Wash, scrub the shells well under a stream of water with a vegetable brush. With a hammer break the thin edges of the shell so that a knife may be inserted to sever the muscle which holds the two parts of the shell together; when this is cut remove the upper half and wipe the edges free from any grains of sand. Then sever the muscle which joins the oyster to the other shell, so that it may be easily lifted out without the necessity of cutting. Arrange on an oyster-plate with crushed ice, and serve with salt, black pepper and lemon juice. A quarter of lemon cut lengthwise may be placed in the centre of plate.

OYSTERS ROASTED IN THE SHELL

Wash the shells very carefully with a brush. Put them in a wire broiler over glowing coals, the round side of shell down so as to hold the juice. Cook them quickly, turning once or twice until the shell opens. They may also be done in a hot oven. When done remove the upper half of the shell; season them quickly with salt, pepper and a tiny bit of butter and vinegar, if liked, and serve them while very hot.

The true oyster flavor is delightfully developed by preparing in this way. They may also be served with melted butter, salt, pepper and lemon juice.

PAN ROAST OYSTERS

Look over oysters that there may be no shell, and drain. Put in sauté pan or chafing dish and gently stir with spoon. When bodies grow plump and the edges curl remove from heat. Season with salt and pepper and a little butter and serve on rounds of toast, with eighth of lemon for individual dishes; or serve on platter and garnish with toast points, watercress and lemon.

BROILED OYSTERS

Select large oysters. Drain in a cloth or napkin, turning them from one side to the other to make them as dry as possible; meanwhile soften some butter and season some cracker crumbs with salt and pepper. Then, holding each oyster on a fork, dip it into the crumbs, then into the melted butter and again into the crumbs.

Arrange them in an oyster broiler (which differs from ordinary broilers by having the wires closer together) and broil over a hot fire for about two minutes, turning the broiler every few seconds. They should not be shriveled, but plump, soft, tender and juicy.

The salt and pepper in the crumbs will sufficiently season them. Serve plain, garnished; or prepare cream toast and sprinkle with fine chopped celery, and place the broiled oysters on top.

OYSTER STEW

1 cup oysters.
1⅓ cups milk.
1½ tablespoons water.
½ teaspoon salt.
Speck pepper.
1 tablespoon butter.

Scald the milk. Put oysters in a strainer placed over a bowl, and add water. Carefully pick over oysters to remove particles of shell. Heat the liquor which has drained from the oysters to the boiling point, and strain through the finest strainer or cheese-cloth. Put in the oysters and simmer, but *do not boil*, until they begin to grow plump and the edges curl and separate. Strain the liquor into the scalded milk, season, add oysters and serve immediately.

Note.—One-half amount may be used.

OYSTER SOUP

1 cup oysters.
½ cup water.
1 cup milk.
Bit of onion.
2 tablespoons butter.
1½ tablespoons flour.
Grating of mace.
Salt and pepper.

Scald the milk. Melt the butter, add the flour and pour on gradually the scalded milk; add mace and onion, and cook thoroughly.

Put oysters in a strainer placed over a bowl, add water and carefully pick over oysters to remove particles of shell. Heat liquor which has drained from oysters to the boiling point, add oysters and cook until plump and edges curl. Drain off liquor and add to soup. Season, add oysters and serve immediately.

OYSTER SOUP (GUM GLUTEN)

One-half pint of oysters, heated in their own liquor; strain. Put in saucepan one-half teaspoonful butter and a scant half-teaspoonful of Gum Gluten Ground; add liquor, and, when slightly thick, oysters, pepper and salt. For variety, add occasionally a tablespoonful of cream.

CREAMED OYSTERS

1 cup oysters.
2 tablespoons water.
Salt and pepper.
1 tablespoon butter.
2 tablespoons flour.
1 cup cream or rich milk.

Put oysters in a strainer placed over a bowl, add water and carefully wash, feeling each oyster to be sure that no shell adheres. Dry in a napkin. Spread on a plate and season with salt, pepper and a few grains of cayenne.

Make a rich cream sauce; melt butter, add flour and stir in gradually the scalded cream or milk. When the sauce is well cooked, roll in it the seasoned oysters, put them in individual scallop dishes or a shallow baking dish. Bake in a hot oven for ten minutes in small dishes, or fifteen if in the single large one. This gives time for the oysters to become cooked, but not toughened. The mixing of the oysters and sauce should be done quickly, so that the sauce does not become cold before being put into the oven. If the sauce becomes cold, the cooking will require longer time.

CREAMED OYSTERS NO. II

½ cup cream or rich milk.
1 tablespoon flour.
¼ teaspoon salt.
1 teaspoon butter.
8 oysters.

Wet the flour with a little cold milk; scald the cream, add the flour and cook well. Just before serving add the drained oysters and cook until they grow plump and the edges curl; add the salt and butter. Serve in Swedish timbale shells, little scooped-out buns, or on rounds of toast.

SCALLOPED OYSTERS

1 cup oysters.
½ cup cracker crumbs.
¼ cup stale bread crumbs.
2 tablespoons melted butter.
Salt.
Pepper.
1 tablespoon cream.
2 tablespoons oyster liquor.

Prepare the oysters. Stir together crumbs and melted butter. Butter a small baking dish and sprinkle part of the crumbs in it. Put in half the oysters, sprinkle with salt and pepper, then a layer of crumbs, pour over enough cream or oyster liquor to moisten well, add the remaining oysters, season, and finish with a layer of crumbs on top. Bake in a hot oven about ten minutes, till oysters are plump and crumbs browned. Serve hot.

Never allow more than two layers as they will not cook evenly. A sprinkling of mace or nutmeg is considered an improvement by some. Sherry wine may be used in place of cream.

Note.—Use one-half amount for individual recipe.

CLAMS

LITTLE NECK CLAMS

Serve raw on the half-shell in same manner as raw oysters.

STEAMED CLAMS

For steaming, clams should be bought in the shell. Wash in several waters, scrubbing thoroughly. Put into kettle, allowing one-fourth cup water to one quart clams. Cover closely and steam until clams partially open. Care should be taken not to overcook them. Serve with melted butter. A few drops of lemon juice may be added to butter.

CLAM WATER

¾ cup cold water.
Burnham's Clam Bouillon.

To the water add the required amount of the clam bouillon to make the strength desired. Serve hot, cold, or frozen. When necessary, serve in small quantity and repeat at short intervals.

Note.—Clam Bouillon served in the several ways (as a variety) is invaluable in case of weak stomach, indigestion, dyspepsia, and general debility; for the convalescent after fever, and when the patient reaches that stage where the stomach begins to need food.

CLAM WATER NO. II.

¼ cup Burnham's Clam Bouillon.
1 tablespoon milk.
½ cup hot water.
Pepper.
⅛ teaspoon butter.

Blend the clam bouillon, milk and hot water, season with pepper and add the butter. Serve hot.

Note.—The pepper and butter may be omitted when necessary.

CLAM STEW

1 cup clam broth.
1 cup scalded milk.
2 tablespoons butter.
1 tablespoon flour.
¼ teaspoon salt.
Speck pepper.
Soft part of 2 dozen clams.

Melt butter, add flour, add gradually the scalded milk and clam broth, and cook thoroughly. Season, add clams and serve hot.

CLAM SOUP

1 dozen clams.
¼ cup cold water.
2 cups milk.
1 tablespoon butter.
1 tablespoon flour.
Salt and pepper.

Wash and scrub clams and put in kettle with cold water. Cook until shells open. Take from shell and cut off the tough parts; save the soft parts for the soup and keep warm. Add the milk to the juice. Melt the butter, add the flour and pour on gradually the hot liquid. Cook thoroughly; season with salt and pepper, add soft parts of clams, and serve immediately and hot.

CLAM BOUILLON

¾ cup cold water.
½ cup Burnham's Clam Bouillon.
⅛ cup scalding milk.
½ teaspoon butter
Salt.
Pepper.
Celery sauce.
White of egg or whipped cream.

Blend the water and clam bouillon, heat to the boiling point, then add the scalding milk, the butter, and stir well; season with salt, pepper and celery sauce to taste. A small quantity of cracker crumbs may be added to thicken it. Serve in heated bouillon cups and garnish with two teaspoons of whipped cream or well beaten white of egg.

Note.—Clam bouillon is the concentrated juice or extract from the clam itself, and is not made from the liquid found in the shell. It is prepared from the freshly gathered clam, and bottled immediately when ready for use. After opening bottle place on ice and it will keep for several days.

CLAM BOUILLON BISQUE

½ tablespoon butter.	½ tablespoon flour.
1 tablespoon chopped onion.	1 cup boiling water.
½ tablespoon chopped carrot.	Yolk 1 egg.
1 cup Burnham's Clam Bouillon.	¼ cup cream.

Melt the butter, add the finely chopped onion and carrot, cover and cook until the onion and carrot are tender, stirring it occasionally. Add the flour, blending well; then pour on gradually the boiling water and the clam bouillon. Cook five minutes, strain and return to saucepan. Mix the yolk of egg with the cream, and add it slowly to the Bisque. Pour into heated bouillon cups, and serve with small oyster crackers.

BIRDS

QUAIL—SQUABS—CHICKEN

BROILED QUAIL

Singe, wipe with a damp cloth, and with a sharp-pointed knife split the quail down the back, beginning at back of neck and cutting through the backbone the entire length of bird. Lay bird open and remove contents. Cut through tendons at joints. Wipe thoroughly. Season with salt and pepper, rub thickly with softened butter and dredge with flour. Broil ten minutes over clear coals. Serve on hot buttered toast. Garnish with toast points, parsley and currant jelly.

BROILED SQUABS

Prepare, cook and serve the same as quail.

BROILED SMALL BIRDS

All small birds can be broiled according to the directions for quail, remembering that for very small ones it takes a very bright fire, as the birds should only be browned and the time required is brief.

BIRDS BROILED IN PAPER

See chapter on Meats and follow directions for "Chops Broiled in Paper." Page 134.

LARDED GROUSE

Clean and wash the grouse. Lard the breast and legs. Run a small skewer through the legs and tail. Tie firmly with twine. Dredge with salt, rub the breast with softened butter, then dredge with flour. Put into a quick oven. If desired rare, cook twenty minutes; if well done, thirty minutes. Serve on hot platter garnished with parsley and Bread Sauce.

LARDED QUAIL

The directions for cooking and serving are the same as for grouse, except that quail cook in fifteen minutes. Larding gives richness to dry meat that does not have fat enough of its own.

BREAD SAUCE FOR GAME

Crumbs.

⅓ cup coarse dried bread crumbs.
½ tablespoon butter.

Sauce.

1 cup milk.
¼ cup fine bread crumbs.
⅛ small onion.
1 tablespoon butter.
Salt.
Pepper.

Prepare Crumbs.—Dry in a warm oven; sift. Cook the coarse bread crumbs in the butter until a delicate brown, and use to cover breast of bird.

Prepare Sauce.—Put the fine bread crumbs, milk and onion on to scald ten minutes, then skim out the onion, add the butter and seasoning, and serve as a gravy for birds.

BROILED CHICKEN

Dress for broiling, following directions given under Broiled Quail. Season well with salt and pepper, and rub all over with softened butter, especially breast and legs. Put in a well-greased broiler and broil over a clear fire about fifteen minutes, turning often. The flesh side must be exposed to the fire the greater part of the time as the skin side burns easily. When chicken is nicely browned, place in a dripping-pan, skin side down, in a moderate oven twelve minutes. Put on a hot dish, season with salt, pepper and butter, and serve immediately.

This rule is for a chicken weighing about two and a half pounds.

CREAMED CHICKEN

¾ cup cold cooked chicken.
Speck celery salt.
Salt.
Pepper.
1 tablespoon butter.
¾ tablespoon flour.
½ cup rich milk.

Melt butter in saucepan, add flour and pour on gradually the scalded milk. Cook thoroughly. Add chicken cut into dice, and seasonings. Heat well and serve on toast rounds, garnished with toast points and parsley; or use as a filling for Swedish timbales.

Note.—Chicken may be used that is removed from chicken broth when it is tender.

SWEETBREADS

Sweetbreads are the thymus gland of the calf. They are removed and used for food while the animal lives on milk, but change their nature, that is, disappear, when the calf begins to eat grass and hay.

The gland consists of two parts connected by a tubing; the long, slender portion called the " neck " sweetbread, and the round, thick part known as the " heart " sweetbread. These are sometimes sold separately, but should be together. Of the two, the heart sweetbread is the more desirable.

If not to be used immediately, parboil as soon as possible after being taken from the animal as they decompose quickly.

Among epicures sweetbreads are considered a dainty, and are certainly a most acceptable form of food for the sick.

TO PREPARE SWEETBREADS

Remove from paper as soon as received from market, plunge into cold water and allow to stand one hour. Drain. Place immediately in boiling salted water, and add one teaspoon lemon juice or vinegar. Cook slowly twenty minutes; again drain and plunge into cold water that they may keep white and firm. Free from pipe and skin, salt if necessary, and serve as desired.

Sweetbreads are always prepared in this way for subsequent cooking.

BROILED SWEETBREADS

Parboil and cut in halves cross-wise. Sprinkle with salt and pepper, and broil five minutes. Serve with creamed butter to which has been added a little lemon juice.

CREAMED SWEETBREADS

1 cup cream or rich milk.	**½ teaspoon salt.**
2 teaspoons butter.	**Sweetbreads.**
2 tablespoons flour.	

Parboil sweetbreads and cut into one-half inch cubes. Blend flour with a little cold milk to make a smooth mixture; scald cream in double boiler, add the flour mixture and cook thoroughly. Just before serving add the prepared sweetbreads, salt and butter. Serve hot on toasted rounds, and garnish with parsley, or use as a filling for Swedish timbales.

Note.—May use equal proportions of cold cooked chicken and sweetbreads, reheat and serve in the cream sauce.

FRICASSEED SWEETBREADS

Parboil and cut sweetbread into one-half inch pieces. Make a sauce using:

2 teaspoons butter.	**¾ cup hot strong chicken broth.**
1 teaspoon flour.	**¼ cup cream.**
⅛ teaspoon lemon juice.	**Salt and pepper.**

Melt the butter, add the flour, allow it to simmer until a golden brown, then add the hot broth gradually, stirring constantly, lastly the cream. Season with salt, pepper and lemon juice. A speck of curry powder may be added if desired.

Put the cut sweetbread into the sauce, simmer five minutes and serve on sippets or squares of dry toast; garnish with parsley.

SWEETBREADS WITH PEAS

Parboil and boil sweetbreads, arrange in centre of platter, and serve the peas (cooked and seasoned) around them. Or the peas may be piled in centre of platter and the broiled sweetbreads arranged as a border. A cream sauce may be poured over all; for it, use the recipe in Creamed Sweetbreads.

EGGS

Eggs are one of the most valuable forms of food for the sick. They are albuminous in nature and consist practically of the following substances—protein, water, fat and mineral matter. The composition of the hen's egg is as follows:

	Refuse	Water	Protein	Fat	Ash	Fuel value per pound calories
Whole egg as purchased...	12.2%	65.5%	11.9%	9.3%	0.9%	635
Whole egg, edible portion .		73.7%	13.4%	10.5%	1.0%	720
White		86.2%	12.3%	0.2%	0.6%	250
Yolk		49.5%	15.7%	33.3%	1.1%	1.705

Farmer's Bulletin No. 128. U. S. Department of Agriculture.

From this table it may be seen that the white of egg consists of eight-tenths water, the remaining portion being principally protein (albumin), with a little mineral matter, etc., the yolk is about half water, one-third fat, and nearly one-sixth protein, with almost twice as much mineral matter as the white. The great richness of the yolk of egg in fat, in lime salts, in organic compounds of phosphorus and iron, make it a peculiarly valuable food for young infants, especially those which are suffering from rickets.

The principal constituent of the egg is albumin, which should be prepared in such a manner as to require the least possible expenditure of force in digestion. Those who are ill cannot afford to waste energy, and whether they are forced to do so or not depends much upon those who prepare their food.

The proper cooking temperature of albumin is 160 to 180 degrees Fahrenheit, when it is found to be tender, soft, jelly-like, and in an easily digested state.

But cooked at the boiling point of water, 212 degrees Fahrenheit, albumin is found to be firm, compact, tough and indigestible. With this knowledge we can appreciate the necessity of cooking eggs at a temperature below that of boiling water. It is often advisable to cook the white and yolk of eggs separately, as the yolk when hard cooked (at proper temperature) and mealy is more easily digested than the soft cooked yolk, and the white more easily digested soft cooked.

Eggs should be kept in a cool, dry place. When using several eggs, break them separately into a saucer, to test the quality of each. If eggs are not perfectly fresh they should not be given to a child or to a person of delicate digestion, for with every day of age they lose something of their nutritive value.

To Test a Fresh Egg.—Put into cold water, if fresh they will sink, or hold to the ear and shake slightly, there should be but little sound; hold in front of an electric light or candle in a dark room, if they look clear the eggs are fresh.

SOFT COOKED EGGS

Put the eggs into a saucepan of boiling water. Put saucepan on back of stove, or where the water will keep very hot, but not boil. Cook ten minutes. Keep temperature about 160 degrees Fahrenheit, or a little above. Serve in heated cups.

Note.—A stone crock is nice to use as it keeps more even heat. Have the size of utensil in accordance with the number of eggs to be cooked, so that the cold eggs will lower the temperature of the boiling water.

SOFT COOKED EGGS NO. II

Into the top and bottom of a small double boiler put boiling water. Place eggs in the top carefully with a spoon, and cook six or seven minutes, according to the size of egg.

HARD COOKED EGGS

Put eggs in a saucepan of boiling water, and put on back of stove, or where the water will keep very hot, but not boil. Cook one-half hour. Keep temperature about 180 degrees Fahrenheit, or a little below. Serve in heated cups.

Note.—The yolk should be dry and crumbly. Have the size of utensil in accordance with number of eggs cooked, so that the cold eggs will lower the temperature of the boiling water.

STEAMED EGGS

Butter an egg shirrer or a small sauce-plate and pour in the eggs. Salt, place in steamer over boiling water, and cook till white is firm. Cooked in this manner, the white is tender and light and can be eaten by invalids.

BAKED EGGS (GUM GLUTEN)

Break an egg into a baking-cup, pour gently over it a large tablespoonful of butter sauce; then add a thick layer of grated cheese; sprinkle with Gum Gluten cracker crumbs, and dot with bits of butter. Bake until the egg is set, and serve at once.

BAKED EGGS NO. I

Plain baked eggs make a pretty breakfast dish. Take a deep earthen plate, butter it and break in the eggs, adding salt, pepper, bits of butter, and bake in a moderate oven until the white is set. Garnish with curled parsley and serve with buttered toast. Use a small dish to prepare one egg.

BAKED EGGS NO. II

1 egg.	**½ tablespoon cream.**
Pepper and salt.	**Bits of butter.**

Break the egg into a well-buttered dish, sprinkle with pepper and salt, add the butter and cream; bake until the white is set (about ten minutes). Serve very hot. Grated cheese may be sifted over it.

GOLDEN-ROD EGGS

1 hard-cooked egg.	2 slices toast.

Sauce

2 teaspoons butter.	Speck white pepper.
1 tablespoon flour.	1 cup scalded milk.
1 saltspoon salt.	

Prepare the sauce. Add the white of egg chopped fine, pour over the toast and rub the yolk through a strainer over the top. Serve at once.

Sauce.—Melt butter, add flour and gradually the scalded milk; cook well and season with salt and pepper.

EGG NESTS

1 egg.	1 round of toast with toast points.
¼ teaspoon butter.	
Salt to taste.	

Toast bread. Separate egg. Beat white to a stiff froth. Salt to taste. Spread toast with butter and put white of egg on in shape of nest. Make a depression in centre, put in the butter and drop the yolk in the hollow. Cook in a moderate oven three or four minutes.

Note.—May be cooked in tumbler placed in pan of water, allowing the water to heat gradually, and as the white rises, make a depression and drop in yolk.

It may be served with Tomato Sauce.

PLAIN OMELET

½ saltspoon salt.	Speck pepper.
1 tablespoon milk.	1 egg.
2 teaspoons butter.	

Beat the egg and add milk, salt and pepper. Heat the sauté pan, and put in the butter; when it melts pour in the mixture. Gently shake pan so omelet will not adhere to it; lift up at sides with a knife, and when a delicate brown set pan in oven a minute to absorb moisture on top. Fold omelet half over, turn on a hot dish, and serve immediately.

FOAMY OMELET

1 egg.	½ saltspoon salt.
1 tablespoon milk.	Speck pepper.
2 teaspoons butter.	

Separate egg and beat white to a stiff froth. Beat yolk till light, add milk, salt and pepper; lightly fold the yolk into the white. Put butter into sauté pan, when it bubbles pour in the mixture and cook same as Plain Omelet.

MEAT OMELET

Mix one tablespoon ham, or any meat, chopped fine, with either plain or foamy omelet, and cook as directed. Or when omelet is cooked, the chopped meat may be spread over before folding.

A little chopped parsley may be added.

Oysters either whole or chopped, or stewed tomatoes may be used instead of meat.

BAKED MEAT OMELET

Prepare Foamy Omelet and add to it the chopped meat. Put it into a buttered pudding-dish, set it in a pan of hot water and bake until firm.

BREAD OMELET

2 tablespoons bread crumbs.	Speck pepper.
2 tablespoons milk.	1 egg.
Speck salt.	1 teaspoon butter.

Soak bread crumbs in the cold milk for ten minutes, add the salt and pepper. Separate egg and beat until light. Add the crumbs and milk to the yolk and fold in the white. Follow general directions as for Plain Omelet.

POACHED OR DROPPED EGGS

Toast a square or round piece of bread and four toast points; put on hot plate and garnish with a sprig of parsley. Have a shallow pan two-thirds full of boiling salted water, allowing one teaspoon salt to one pint water. Put a slightly buttered muffin ring on a buttered skimmer in the water. Break an egg into the ring. The water should cover the egg. When there is a film on top and the white is firm, carefully take up skimmer, remove ring, loosen egg with a knife and place on the toast; salt slightly. The toast may be buttered if desired.

EGG POACHED IN MILK

1 egg.
1½ teaspoons butter.
½ cup thin cream.
Salt.
2 tablespoons grated cheese.

Melt butter in top of double boiler, add cream and when hot drop in carefully the egg. Cook until white is nearly firm, add salt and sprinkle with cheese. Serve on toast. Cheese may be omitted.

CODDLED EGGS

1 egg.
½ cup milk.
1 teaspoon butter.
1 saltspoon salt.
Speck pepper.

Beat egg in top of double boiler until light, add milk and rest of ingredients and stir over boiling water until it thickens; allow it to stand a few minutes without stirring, to set. Serve on toast or hot rice.

EGG SANDWICHES

1 hard-cooked egg.
¼ teaspoon salt.
Speck paprika.
⅛ teaspoon mustard.
3 drops vinegar.
1 teaspoon butter.

Mince the egg very fine with a silver fork, add seasonings and butter, and mix thoroughly. Butter very thin slices of bread, spread with egg mixture, cover it with small watercress leaves, or bits of nasturtium leaves, or lettuce. Cover with another slice of bread, and cut in triangles or rounds. Serve on small plate and doily.

SHIRRED EGGS

Butter an egg shirrer, ramikins, or small earthen cups; put one egg in each without breaking yolk;

sprinkle a little salt and white pepper over, then put on back of range or in a moderate oven until white is set. If baked, cover with a buttered paper to keep from browning.

Note.—One and a half tablespoons thick cream, two tablespoons bread crumbs, and salt may be put under or over egg, and baked in moderate oven eight minutes.

SHIRRED EGGS NO. II

Butter small, deep earthen dishes and line with fine white bread crumbs moistened to a paste, and seasoned with salt and peper. Break an egg in each, sprinkle with a few grains of salt, cover with more paste and bake in a pan of hot water, placed in the oven. When egg is set, serve with two tablespoons of tomatoes or cream sauce poured over it, and garnish with a sprig of parsley.

FILLED EGGS

1 hard-cooked egg.
1 teaspoon butter or
1 teaspoon olive oil.
⅛ teaspoon mustard.
Paprika.
Salt.

Remove the shell and cut the egg in halves lengthwise. Take out the yolk carefully without breaking the white. Rub the yolk to a smooth paste, adding the butter or oil and the seasonings, and mix thoroughly. A small quantity of finely chopped ham, tongue or chicken may be added. Fill the whites with the mixture and serve on lettuce, or in a bed of parsley.

FISH

Fish belongs to the nitrogenous foods. The principal constituent is albumin. The cooking temperature, to thoroughly coagulate, but not harden the albumin, is 160 to 180 degrees Fahrenheit. The same principles which apply to the cooking of meat apply also to the cooking of fish.

Objective points and methods:

To Retain the Juice.—Baking, Broiling, Boiling and Frying.

To Extract the Juice.—Soup.

To Extract and Retain the Juice.—Chowder.

Fish is similar in composition to meat, but contains less fat and more water.

Fish is divided into two general classes: the oily, or dark flesh fish, and the non-oily or white flesh fish.

The dark flesh fish are more stimulating and nourishing than the white flesh fish, but are not as easily digested, as the oil is distributed throughout the body; therefore they should not be eaten by those of weak digestion.

The white flesh fish, owing to their easy digestibility, are especially useful to those having a great demand for nervous energy, or to those of sedentary habits. They are less nutritious and stimulating than the dark flesh fish, as they contain less solid matter and more water.

Most of the oil is found in the liver.

It is due to this that fish is considered a brain food, and not, as is popularly supposed, to the amount of phosphorus they contain.

Fresh Fish.—Great care should be taken that fish is perfectly fresh, in season, and thoroughly cooked, or it will be indigestible and sometimes poisonous.

Test for Fresh Fish.—In fresh fish the gills are red, the flesh firm, the eyes bright and full, and there is no unpleasant odor.

Lemon juice and vinegar are desirable condiments to serve with fish. The acid is a desirable neutralizing agency as the juice of fish, and especially shell fish, is of an alkaline nature

BROILED FISH

White fish, trout, small blue fish, mackerel, shad and small cod should be split down the back, and broiled whole, and if preferred, cut off the head and tail. Halibut and salmon should be cut into inch slices and turned often while broiling.

Clean Fish. Wipe with a cloth wet in salt-water, and dry on a fish towel. Season; oily fish need only salt and pepper, but dry white fish should be spread with butter and salt and pepper before broiling. Use a double wire broiler greased well with salt pork rind. Put thickest edge of fish next middle of broiler, cook flesh side first, then turn and broil on skin side, just long enough to make crisp and brown. The time will vary with thickness of fish. The fire should be hot and clear. When ready to serve, loosen the fish from broiler on each side. Open broiler, slide fish on to platter, having flesh side uppermost. Spread with butter, salt and pepper. Garnish with parsley and slices of lemon. Or serve with Butter Cream and a border of potato balls.

BUTTER CREAM

Cream a little butter; season with salt, cayenne, lemon juice (speck salt and pepper, one-half teaspoon lemon juice). Add finely minced parsley or chopped pickle, such as cucumber or olive. Prepare quantity according to size of fish. Put it on the fish, and place in oven a moment until butter is melted.

BAKED FISH

Clean fish. Wipe with cloth wet in salted water, dry on a fish towel and bake on a greased fish sheet, placed in a dripping pan. A strip of cotton cloth, by which it may be lifted from the pan, may be substituted for the fish sheet. Sprinkle with salt and pepper, brush over with melted butter, dredge with flour, and place around fish small pieces of fat salt pork. Bake in hot oven until fish separates from bone when lifted with fork. Baste every ten minutes. Serve plain with melted butter, or with Egg Sauce.

EGG SAUCE

2½ tablespoons butter.
1½ tablespoons flour.
¼ teaspoon salt.
Speck pepper.
¾ cup hot water.
2 eggs.

Melt one-half the butter; add flour and seasoning and pour on gradually the hot water. Boil five minutes and add remainder of butter in small pieces. Add two hard-cooked eggs cut into one-fourth inch slices, or the beaten yolks may be added to hot sauce with one-half teaspoon lemon juice.

BAKED FISH (GUM GLUTEN)

For baked fish make a dressing with one cup of Gum Gluten bread crumbs, one-half an onion, chopped fine; one tablespoon celery, chopped fine, one tablespoon of butter; pepper, salt, lemon juice and parsley.

FISH (GUM GLUTEN)

Fish should be rubbed with salt and pepper and dipped in Gum Gluten Ground, or rolled in egg and Gum Gluten Cracker crumbs. Sauté (or fry) in oil or butter.

CREAMED FISH (GUM GLUTEN)

½ cup cooked fish.
Salt, pepper, lemon juice.
½ cup cream sauce.
Gum Gluten bread crumbs.

Season fish with salt, pepper and lemon juice, add cream sauce, put into ramikins or cups, sprinkle with Gum Gluten crumbs, and bake.

CREAM SAUCE (GUM GLUTEN)

½ cup milk.
1 teaspoon Gum Gluten Ground.
1 teaspoon butter.
Salt.
Cayenne.

Melt the butter, add the flour and pour on gradually the scalded milk; cook thoroughly and season.

HALIBUT À LA CREOLE

½ pound halibut.
½ cup tomatoes.
¼ cup water.
Small piece onion.
Sprig parsley.
1 clove.
½ teaspoon sugar.
¾ tablespoon butter.
¾ tablespoon flour.
Salt and pepper.

Tomato Sauce.—Blend tomatoes, water, onion, parsley, clove and sugar, and cook ten minutes.

Melt the butter, add the flour and pour on gradually the hot mixture. Add salt and pepper to taste, cook five minutes and strain.

Clean fish. Wipe with cloth wet with cold salted water and dry thoroughly. Put in baking tin, pour around half the sauce and bake until fish separates easily from bone, basting often. Serve on hot platter, pour around it the remainder of the sauce and garnish with parsley.

CREAMED CODFISH

Flake the fish in small pieces, remove the bone; salt cod fish should be put into several cold waters to remove some of the salt. Prepare the potatoes, cutting them into eighths, or if small into fourths, add the shredded fish and boiling water to cover; cook until potatoes are tender, drain off the water (saving it for the sauce), add a little butter and season with pepper, and mash lightly and heap in centre of platter.

Sauce

1 pint fish and potato water.
4 tablespoons butter.
4 tablespoons flour.
Pepper.

Melt the butter, add the flour and pour on gradually the potato water. Cook thoroughly, season with pepper, and pour about the cod fish, and garnish with slices of hard-cooked egg and parsley.

CREAMED CODFISH (GUM GLUTEN)

½ cup flaked codfish.
1 cup milk or cream.
½ teaspoon butter.
½ teaspoon Gum Gluten Ground.
Yolk 1 egg.
Pepper.

Soak the fish in two waters; melt the butter, add the flour and pour on gradually the scalded milk; cook thoroughly, add codfish and egg, cook five minutes, season and serve on Gum Gluten toast or fresh bread.

BUTTER SAUCE (GUM GLUTEN)

½ cup boiling water.
1 teaspoon Gum Gluten Ground.
1 teaspoon butter.
Salt.
Cayenne.
Onion, lemon juice or chopped parsley.
Blend as for cream sauce.

MEAT

The term meat includes the flesh of all animals used for food. Meat is a nitrogenous food. The principal constituent being albumin the cooking temperature is 160 to 180 degrees Fahrenheit.

The composition of meat is chiefly protein (albumin, fibrin, myosin, gelatin), and fat, mineral matter, and water.

Beef, is without doubt, the most valuable kind of meat; it is nutritious, of excellent flavor, and comparatively easy of digestion.

Use good quality of meat; buy of a reliable dealer who will be of assistance in aiding you to distinguish between good and poor qualities.

Test for Good Beef.—The flesh is firm and of fine-grained texture, bright red in color, well mottled and coated with fat. The fat is of yellowish color, and firm.

Cooking of Meat.—Heat penetrates meat slowly. At a temperature of 158 degrees Fahrenheit, the meat assumes a gray color, as a result of the decomposition of the coloring matter of the blood. At the same time a peculiar odor of cooking develops, which is due to the decomposition of the extractive protein matter of the beef.

At a temperature above 104 degrees Fahrenheit, meat begins to lose weight from the separation of water, which contains salts, extractive protein matter and albumin. This process continues as the temperature rises.

Coagulation of the albumin is an important factor in cooking meat, and varies with the mode of cooking.

As broiling is the preferred method of preparing meat for the sick and convalescent, it is the only method taken up in this chapter.

Broiling.—In broiling, the meat is to be cooked in its own juices, it is, therefore, evident that these must be retained as completely as possible. In order to succeed one has to struggle with dry heat, which may not only cause rapid evaporation, but may volatilize or decompose some of the flavoring principles.

At first the temperature should be sufficiently high to quickly coagulate, even harden the albumin on the outside surface, so as to form a layer or protecting coat over the whole; then so modify and regulate the heat that the interior will be raised to a temperature that will cook it properly without loss of its nutritive properties.

In broiling we partially sacrifice the outer layer of the meat, to preserve the inner portion.

The time for exposure will be different for different kinds of meat. Beef and mutton require a shorter time than lamb, chicken or game.

A piece of meat properly broiled swells, and when cut, the liquid portion flows out readily; but if cooked too long the albumin coagulates and the meat loses its moisture, shrinks, and becomes tough.

TO BROIL STEAK

Wipe, trim off the superfluous fat and remove a little of the bone. Save the flank ends for broiled meat cakes. Grease the broiler with some of the fat. Place meat in broiler with fat edge next to handle and broil over a clear fire, turning every ten seconds for the first minute, holding broiler near the coals that the surface may be well seared, thus preventing escape of juices; then cook at lower temperature, holding the broiler higher.

Steak cut one inch thick will take five minutes if liked rare, and eight minutes if well done. Serve on a hot platter and season with butter, salt and pepper.

Note.—Steak should be cut at least one inch thick;

many prefer it much thicker. Sirloin, porterhouse, cross-cut of the rump and top of the round are all good steaks.

Maître d'Hôtel Butter may be served on broiled steak.

MAÎTRE D'HÔTEL BUTTER

- ¼ cup butter.
- ½ teaspoon salt.
- ½ saltspoon pepper.
- 1 tablespoon chopped parsley.
- 1 tablespoon lemon juice.

Rub the butter to a cream; add salt, pepper, parsley and lemon juice. Spread on hot beefsteak.

MUTTON CHOPS BROILED

Cut away the tough outside skin, trim off a part of the fat. Broil same as steak—that is, close to the glowing coals—for about one minute, turning every ten seconds, then cook at a lower temperature, holding the broiler higher. Will take four or six minutes for a chop one inch thick. Mutton, like beef, should be served rare. Season chops with salt and pepper, but not with butter, as the meat is rich and fat and does not require it.

LAMB CHOPS BROILED

Prepare and broil same as for mutton chops, except that they are to be well done instead of rare, to accomplish this about three minutes longer cooking will be required; for a chop one inch thick, from eight to ten minutes.

FRENCH CHOPS

Trim a chop until there is nothing left but the round muscle at the thick end, with a little fat about it. Cut away all the meat from the bone, which will then look like a handle with a meat morsel at one end. Broil, and serve on hot platter with paper handles on chops, and garnished with parsley and peas.

PAN-BROILED CHOPS

Chops are fairly good pan-broiled. The same principle is to be followed as in the cooking over coals—that is, a high degree of heat at first, to sear the outside before the juices escape, and a lower temperature afterward—therefore, heat the sauté pan or spider exceedingly hot (use no fat), drop in the chop, count ten and turn, repeating for about one minute, then draw the pan to the back or side of the stove and finish cooking slowly. A chop one inch thick will be perfectly done in from five to seven minutes. If the pan is hot enough at first there will be no loss of juice or flavor. Season and serve in the same manner as broiled chops.

CHOPS (OR BIRDS) BROILED IN PAPER

Prepare a chop as for pan-broiling. Spread a piece of paper evenly and thickly with butter. Lay on it a nicely trimmed chop and double the paper with edges together. Fold and crease the edges on the three sides, then fold and crease again, so that the butter cannot run out. These folds should be half-an-inch wide. It will be necessary to have the sheet of paper—foolscap or heavy white paper—considerably more than twice as large as the chop. Broil over coals, not too near, *turning often* so that the temperature will not get so high as to ignite the paper. A chop broiled in this way is basted in the butter and in its own juices, and is very delicate. A chop three-quarters of an inch thick will cook in five minutes; one an inch thick, in eight.

Should the paper ignite, it need not destroy the chop. Take it out and put into a fresh paper and try again. The chop should be served hot, seasoned with salt and pepper.

Note.—Birds may be broiled in the same way.

VEGETABLES—VEGETABLE SAUCES

As food, fresh vegetables are valuable chiefly because of their mineral salts. They give variety to the diet and are used to add flavor to other foods.

Their composition represents about eighty to ninety per cent. water. Cellulose forms the ground work of all vegetable tissue. Sometimes starch is found in either small or large quantities, with a small amount of mineral salts and other substances. With the exception of peas, beans and lentils the amount of protein is small.

General Rules for Cooking Vegetables.—Wash thoroughly; pare, peel, or scrape, according to the kind. Let them stand in cold water until ready to cook, to keep them crisp, to freshen them when wilted, or to prevent them from turning dark.

Cook in enough freshly boiling salted water to cover, and keep the water boiling. Allow one teaspoon of salt to one quart of water. Salt may be added when vegetables are put in, except in the case of delicate green vegetables, as peas, spinach, etc., when it should not be added until nearly done. To preserve the color, cook green vegetables uncovered.

Vegetables should be cooked only until tender, drained when necessary, and served promptly.

The composition of the potato (Letheby) is as follows:

Water	75.00 per cent.
Starch	18.80 per cent.
Nitrogenous matter	2.00 per cent.
Sugar	3.00 per cent.
Fat	.20 per cent.

From this we see that starch is the principal nutrient, and the potato should, therefore, be cooked with reference to that ingredient alone. Starch, to be rendered digestible, must be cooked in liquid at a high temperature to swell and break the starch granules, and to convert the starch, as far as possible, into that easily digested substance dextrin. Until this conversion takes place starch cannot be assimilated, and the more completely the change is produced in the cooking the more easily will it be digested.

When the patient begins to take solids the vegetable usually prescribed first is Baked Potato.

A Baked Potato is no better than a boiled potato if cooked in a slow oven. But, on the other hand, if put into a hot oven, 380 to 400 degrees Fahrenheit, the conversion of the starch will take place in a degree, and so be better prepared for the change in the process of digestion.

The carrot should be partaken of freely on account of its medicinal qualities.

BOILED POTATOES

Select potatoes of uniform size. Wash, pare and put into cold water to keep from discoloring. Put them into saucepan, cover with boiling water, boil and when partly cooked, add one tablespoon salt to every six potatoes. Cook until soft, about twenty minutes, drain very dry, and shake the pan, without a cover, gently over the stove till the potatoes are mealy. Do not serve in covered dish.

RICED POTATOES

Add salt and pepper to boiled potatoes, and rub them through a heated potato-ricer or squash-strainer into the (hot) dish they are to be served in. Serve immediately, or pour a little milk over the top and brown in the oven.

MASHED POTATOES

For mashed potatoes the uneven sizes may be used;

the larger ones should be cut; so all will be of uniform size. Prepare as for boiled potatoes. When cooked and dried, add salt, butter, pepper and cream in following proportion:

1 pint potatoes.
½ teaspoon salt.
1 tablespoon butter.
½ saltspoon white pepper.
2 teaspoons hot cream or milk.

Put into potatoes the salt, pepper and butter, and mash, leaving them in saucepan cooked in, and on stove so as to keep them hot. Use open-wire masher or fork and beat quickly, so they may be light and dry, not "gummy." Last put in the cream, beat for a moment and serve immediately.

POTATO CAKES

From cold mashed potatoes make slightly flattened balls. Put them in a floured tin, brush each over with milk and bake in a hot oven five minutes, or till a delicate brown.

Note.—These cakes may be sautéed in a little beef fat or butter if desired.

SURPRISE BALLS

Roll the potatoes into balls as above, and with a teaspoon press a hollow in the top. Chop fine some cold, lean meat, season it with salt, pepper and gravy and put one teaspoon of the meat into the hollow of the potato ball. Put a little milk or melted butter on top and brown in oven or sauté.

BAKED POTATOES

Select potatoes of uniform size, not very large, wash and scrub thoroughly, cut off a small piece at each end in order that the steam may escape. Bake in *hot* oven from forty-five to fifty minutes. When baked break open slightly, that steam may escape, and serve on folded napkin.

POTATOES BAKED IN THE HALF SHELL

Cut off top of baked potato and scoop out inside. Mash and season well as for mashed potatoes and add the well-beaten white of egg. Fill the skins with the mixture, heaping it lightly on top, brush over with milk or slightly beaten white of egg and brown slightly. Potatoes may be sprinkled with grated cheese before putting into oven.

POTATOES AU GRATIN

Put cold boiled potatoes, cut into cubes, into a buttered baking dish. Cover with white sauce, put buttered cracker or bread crumbs on top and bake until golden brown.

Note.—A little grated cheese added to the white sauce just before pouring over the potatoes adds a pleasant flavor.

CREAMED POTATOES

1 cup cold sliced or cubed potatoes.
¼ cup milk.
½ tablespoon butter.
¼ teaspoon salt.
½ teaspoon finely chopped parsley.
Speck white pepper.

Heat the milk, put the potatoes in and cook until they have nearly absorbed the milk. Add butter and seasoning, cook five minutes longer, add parsley and serve hot.

POTATO BALLS

Cut the balls with a French potato cutter, using large potatoes, and throw into cold water. Cook for twelve minutes or more in enough boiling water to cover. Salt at end of six minutes. Drain and let them stand a few minutes to dry. Serve as a vegetable, with cream sauce or with parsley butter, or use as a garnish for broiled fish. Test potatoes with a needle to see when tender.

PARSLEY BUTTER

1 tablespoon butter.	Juice ½ lemon.
1 teaspoon chopped parsley.	1 pint potato balls.

Cream the butter, add lemon juice and chopped parsley. Add to the hot potato balls, heat five minutes and serve. Omit lemon juice if desired.

CARROTS

Wash, scrub and scrape off the very thin skin. Cut each carrot into slices from one-fourth to one-fifth inch thick, cut into cubes and cook in boiling salted water until soft—about one hour. Serve with White Sauce No. 1. Carrots are especially wholesome.

ONIONS

Put onions into pan of cold water and peel under water. Put them into boiling water with one teaspoon salt and one-fourth teaspoon soda to one quart water. After cooking five minutes pour off the water and add fresh boiling water, and after ten minutes change the water again. Boil until tender—about one-half hour. Drain off the water and add a little milk, butter, salt and pepper; or serve with White Sauce No. 1.

CREAMED ASPARAGUS

¼ bunch asparagus.	1 slice toast.

Prepare asparagus by washing, removing portions necessary and cutting into one-inch pieces. Cook in boiling salted water until soft. The flower end of stalk needs less cooking, so remove and add when the stalks are partly cooked. Drain off water, season with salt, arrange on toast and pour over White Sauce No. II.

PEAS

Canned peas may be drained, rinsed and cooked in boiling salted water until tender, or the fresh peas in season may be used. Drain and serve with butter, salt and pepper, or with Cream Sauce No. II.

MACARONI

¼ cup macaroni.	1 teaspoon salt.
3 cups boiling water.	Cream.

Break macaroni into one-inch pieces, put into a strainer and rinse with cold water. Cook in boiling salted water twenty minutes, or until tender. Strain, pour a little cold water over it to prevent pieces from adhering; add cream, reheat and season with salt; or serve with Cream Sauce No. II and grated cheese.

BAKED GLUTEN MACARONI

Put Hoyt's Gluten Macaroni into salted boiling water; cook until tender and do not drain. Place the pieces in layers in a baking dish with grated cheese, pepper and butter between. Pour the water in which it was cooked over the macaroni and bake forty-five minutes. Serve hot. If preferred, cream may be used to moisten.

MACARONI WITHOUT CHEESE

Put the macaroni into boiling water and boil forty-five minutes. Season with salt and pepper as desired. Serve with White Sauce made by cooking two tablespoonfuls of Gum Gluten Ground in two tablespoonfuls of butter, taking care not to let it scorch; then add gradually to the mixture two cups of milk, cooking so that it will be smooth and not lumpy. Pour over the macaroni.

VEGETABLE SAUCES

CREAM OR WHITE SAUCE

Use to pour over any vegetable.

- 1 cup milk.
- 2 teaspoons butter.
- 1 tablespoon flour.
- ½ saltspoon salt.
- Speck pepper.

Melt the butter without browning it, add the flour, then pour in the scalded milk gradually, stirring all the time. Let cook five minutes. Add salt and pepper to taste and pour over vegetable very hot.

CREAM SAUCE NO. II

- 1 cup milk or cream.
- 1 tablespoon butter.
- 1 tablespoon flour.
- ½ saltspoon salt.
- Speck white pepper.

Scald the milk. Melt the butter in a saucepan, remove from stove, add the flour, then the scalding milk gradually, put over heat and cook, stirring constantly, until smooth and there is no raw taste of starch.

This sauce may be used in many ways—with creamed oysters, sweetbreads, any cream dish or any scalloped dish.

CREAM SAUCE NO. III

- 1 cup cream or milk.
- 2 tablespoons flour.
- 2 teaspoons butter.
- ¼ teaspoon salt.

Scald the cream. Wet the flour with a little cold milk and add to the hot cream. Cook well. Just before serving add the butter and salt, and pepper if desired.

Sauce blended in this way is especially easy of digestion and generally used as a foundation for creamed dishes.

BREAD

The two practical methods of making bread are with yeast (fermented bread) and with cream of tartar and bicarbonate of soda (unfermented bread).

Fermented Bread.—Yeast is an exceedingly minute form of plant life, which, when given food, flour, moisture and warmth, grows; and by this growth produces carbon dioxide and alcohol.

The carbon dioxide, in its effort to escape, puffs up the flour dough, but owing to the viscous nature of the gluten (the elastic, strength-giving substances of flour). it is caught and retained.

Each little bubble of gas occupies a certain space, and when the bread is baked the walls around these spaces harden and the result is a porous loaf. The alcohol escapes into the oven in the baking.

To bake bread requires a hot oven.

The bread should continue to rise for about fifteen minutes after being placed in the oven, then the rising should cease and the loaf begin to brown.

We bake bread to kill the yeast plant, to render the starch soluble, to expel the alcohol and carbon dioxide and to form a nice flavored crust.

The making of good bread requires care and intelligence on the part of the cook. Use a good brand of flour, fresh yeast, remembering that yeast is a plant and must be put at a proper temperature to grow. Watch each process carefully.

Unfermented Bread.—Carbon dioxide is obtained to lighten bread by causing cream of tartar and bicarbonate of soda to unite chemically.

To one part soda use two parts cream of tartar. When given moisture and heat carbon dioxide is obtained.

Baking powder is a combination of the following ingredients:

Bicarbonate of soda	84 grammes to
Cream of tartar	188 grammes
Starch	5 to 20 per cent.

Bread stuffs should be eaten slowly and thoroughly masticated, in order that time may be given for the saliva to act upon the starch. For if the stomach is hampered with quantities of unchanged starch it cannot perform its work without effort. If these foods were eaten slowly much of the resultant dyspepsia would be avoided.

GLUTEN

Gluten, being the nitrogenous principle of the entire vegetable series, stands related to that grand division as do the albuminoids to the animal kingdom. It is the adhesive principle of grain; and is the grayish, tough, elastic, sticky substance left after the starch is thoroughly washed away from flour.

It resembles the fibrous part of meat and may be termed " the lean meat of the Vegetable Kingdom."

GLUTEN STANDARDS

The necessity for a Standard for Gluten Flour is very apparent to chemists who have had occasion to analyze the various kinds on the market. For years millers have supplied dealers with middlings, entire wheat flour and mixtures containing bran to be sold as gluten flour. Ignorant of those facts, physicians advise their patients to use gluten, but, of course, have invariably been disappointed in results.

With such a situation to contend with, the manufacturers of wheat starch, who obtain the genuine gluten in their process, have met with little encouragement and have been obliged to institute campaigns of an educational character in order to teach that there is a difference.

The physician cannot take the time to analyze all such foods, yet he would like to prescribe them could he feel positive that he is not being defrauded.

The importance of a genuine gluten as an article of diet is well understood by all scientists, which is shown by the action of different committees who are giving this subject attention. The National Committee on Food Standards is at present considering what standard will be most practical, and suggests as a basis a content of 40 per cent. protein. The Board of Health of the State of New Hampshire, realizing the necessity, has taken the first step, and in the bulletin issued January, 1904, gives the following:

" Gluten flour is flour from which the starch has been washed, wholly or in part. Standard Gluten Flour must contain at least thirty (30) per cent. of proteid, calculated by multiplying the nitrogen content by the factor 6.25, and not over forty-eight (48) per cent. starch."

In defining gluten the State chemist has used the term " washed," which of itself excludes all millers' glutens, and as a result leaves but one kind of gluten that can be sold in that State.

To establish a standard of such character that it will make it impossible to sell bran, whole wheat flour or middlings as gluten will, therefore, exclude from the market the millers' glutens which are sold extensively and used by bakers in making so-called gluten bread, and will give the general public and the trade something by which to gauge the various products.

WHEAT FLOUR BREAD

1 pint hot milk (or water).
1 pint cold milk (or water).
1 tablespoon sugar.
2 tablespoons butter or lard.
1 tablespoon salt.
1 Fleischmann's yeast cake.
Flour.

Into mixing bowl put the scalded milk, add the butter; when melted add the sugar, salt and cold milk. Save one-half cup of this liquid, and when lukewarm soften the yeast in it and stand where it will keep warm. To above mixture add warmed sifted flour (sift twice before using) to make a thin batter, add softened yeast and more flour until stiff enough to knead. Knead until light and spongy. Care should be taken not to add more flour than is absolutely necessary. Butter a large stone crock or bowl, place bread in it and cover. Let rise three and one-half hours at about 75 degrees Fahrenheit (in a medium warm room). Then remove from jar and knead about twenty minutes until smooth and velvety, put into pans, cover carefully and let rise one hour or until double its bulk.

Bake in a hot oven from forty-five minutes to one hour, depending upon size of loaves.

If hard crust is desired, remove from pans and cool in a draft of air. For soft crust, before bread cools roll it in a clean cloth.

This quantity will make three good sized loaves; one-half the amount may be used for one large loaf.

ENTIRE WHEAT BREAD

2 cups scalded milk.
2 cups boiling water.
3 tablespoons butter.
3 tablespoons salt.
5 tablespoons molasses.
2 yeast cakes dissolved in ½ cup lukewarm water.
2 cups white flour.
Entire wheat flour enough to knead.

Make as for wheat flour bread, and add molasses after the first rising.

One half of recipe may be used.

WHOLE WHEAT OR GRAHAM BREAD

Make the same as wheat flour bread, adding two tablespoons of sugar or molasses. Make a batter with white flour, using three or four cups, then use whole wheat or graham flour. Let rise longer than for white bread, and put immediately into pans without second kneading.

Note.—Omit sweetening if desired.

BREAD WITHOUT STARCH

To be deprived of bread is one of the greatest restrictions in diet. Numerous experiments have proven that the only bread practically free from starch can easily be made from Gum Gluten by using the recipe as given below. The amount of starch remaining after the yeast has done its work is so small that the bread is pure and palatable. It is thoroughly reliable as a food for diabetics and for use in stomach troubles.

GUM GLUTEN BREAD

½ yeast cake.	3½ cups Gum Gluten Ground.
2 cups lukewarm water.	½ teaspoon salt.

Soften the yeast in a small portion of the water and add to the ingredients. Mix to a stiff dough and knead thoroughly, using more gluten if necessary to keep it from sticking to the board. Shape into a loaf, place in a buttered pan for about 2½ hours to rise until the dough is about twice its bulk. Then bake for 45 minutes. If desired the dough may be given a second mixing after the first rising, letting it rise again before baking.

Note.—Gum Gluten Bread may be made the same as ordinary wheat flour bread with the exception of shortening, which is not required.

Avoid having the water too warm or the bread will be sticky; the chill taken off is all that is necessary.

BRAN BREAD

Follow rule for Gluten Bread, using one part of bran to four parts of Gluten Flour with one cup of moisture. If the bran is increased the moisture must be lessened.

BOSTON BROWN BREAD

1 cup granulated Indian meal.	2 cups sour milk.
1 cup rye flour.	2 teaspoons soda.
1 cup graham flour.	¾ cup molasses.
1 teaspoon salt.	

Mix dry ingredients (except soda) together; dissolve soda in sour milk and add, then, molasses. Pour into buttered tins and steam three or four hours.

GUM GLUTEN BISCUIT

1 cup Gum Gluten Self-raising.	1 saltspoon salt.
1 tablespoon butter.	Milk or water.

Mix and sift dry ingredients, rub in the butter, add milk or water to make a soft dough. Roll and cut with biscuit cutter. Makes two large biscuits.

GUM GLUTEN DROP BISCUIT

1 cup Gum Gluten Ground.	½ teaspoon baking powder.
1 teaspoon butter.	Milk or water.
½ teaspoon salt.	

Mix and sift dry ingredients, rub in the butter, add milk or water to make a stiff batter. Drop from spoon into a buttered pan, and bake very quickly. Makes three.

BRAN BISCUIT

½ cup wheat bran.	1 teaspoon melted butter.
½ cup improved graham flour.	1 saltspoon salt.
1 teaspoon baking powder.	Milk.

Sift dry ingredients, rub in the butter and add milk to make a soft dough. Roll it out and bake in hot oven.

BAKING POWDER BISCUIT

1 cup flour.
2 teaspoons Royal baking powder.
¼ teaspoon salt.
1 tablespoon butter or beef dripping.
½ cup (scant) milk or water.

Sift dry ingredients and sift twice, rub in the butter with tips of fingers, stir in gradually the liquid; mix as soft as can be handled, put dough on a well-floured board, pat lightly to one inch thickness, cut with biscuit cutter, put on a shallow buttered tin, heated, and bake in a hot oven. Put a little milk on top of each biscuit before baking to make them brown well.

Note.—Dough may be lightly kneaded as for bread, and then cut.

GUM GLUTEN MUFFINS

1 cup Gum Gluten Self-raising.
1 cup milk, or part water.
½ teaspoon salt.
1 egg.

Beat egg and add the milk. Sift the Gluten and salt and gradually add the liquid and beat thoroughly. Bake in hot buttered gem pans.

BRAN MUFFINS

2 cups bran.
1 cup flour.
1 teaspoon soda.
¼ cup butter.
3 tablespoons molasses.
1½ cups sour milk.

Mix dry ingredients, rub in the butter with the tips of the fingers, add molasses and sour milk, put into hot muffin tins and bake in a hot oven.

WHITE GEMS

2 cups flour.
1 teaspoon salt.
4 teaspoons Royal baking powder.
2 tablespoons butter.
2 tablespoons sugar.
2 eggs.
1 cup milk.

Sift dry ingredients into mixing bowl, add melted butter and rub it in with tips of fingers. Add the well-beaten eggs and the milk gradually and beat all well together. Have gem pans well greased and heated;

fill two-thirds full and bake in a very hot oven fifteen or twenty minutes. Put a little melted butter on each gem before putting it into the oven. Done when a straw comes out clear.

CORNMEAL GEMS

1 cup flour.
½ cup cornmeal.
⅓ cup sugar.
4 teaspoons Royal baking powder.
½ teaspoon salt.
1 egg.
1 cup milk.
1 tablespoon melted butter.

Sift dry ingredients into mixing bowl, add the milk and well-beaten egg and the melted butter. Put into well-greased hot gem tins and cook in a quick oven. Done when straw comes out clear.

POP-OVERS

1 egg.
1 cup milk.
Speck salt.
1 cup flour.

Beat egg until very light, add milk and salt and sift in the flour very carefully—beat very light, never stirring. Have ready gem pans or stone custard cups, well greased and heated. Pour in mixture, filling two-thirds full, and bake in quick oven. This will make six large pop-overs. The success of these pop-overs lies in beating the batter well and in having the cups very hot before putting in the mixture.

Note.—These cannot be cooked successfully in tin.

BUTTER BALLS

Cut butter in small pieces size of balls desired, and put in ice-water. Soak the butter paddles in boiling water ten minutes, then chill in ice-water. Hold a paddle firmly in the left hand and roll each piece of butter with the right paddle until round. If butter sticks it must be chilled longer, or paddles must be rubbed with salt and reheated.

One pound of butter will make about thirty balls.

SANDWICHES

TO PREPARE SANDWICHES

Use white, entire wheat, graham or Boston brown bread. Bread may be buttered before cutting from loaf, spread with soft, plain butter cut into very thin slices, cover with another slice, press together, cut in fancy shapes, or roll. Wrap in waxed paper or cover with a dry napkin, over which place a slightly moistened one, until ready to serve.

Bread may be baked purposely for sandwiches by filling one-half pound baking powder boxes half full of dough, let rise and bake. Serve sandwiches on a dainty doily on a small plate.

BREAD AND BUTTER SANDWICHES

Butter bread slightly, cut very thin and put slices together. Cut in fancy shapes.

FRUIT SANDWICHES

Spread bread and butter sandwiches with stewed dates, figs or prunes, seasoned with a little lemon juice.

LETTUCE SANDWICHES

Spread bread and butter sandwiches with a little mayonnaise dressing, lay in fresh, crisp lettuce leaves washed and dried thoroughly, and cut even.

EGG SANDWICHES

See chapter on " Eggs " for recipe. Page 124.

NUT SANDWICHES

Prepare same as lettuce sandwiches, adding chopped nuts to the mayonnaise.

RAW BEEF SANDWICHES

See chapter on "Beef Preparations" for recipe. Page 67.

CHICKEN SANDWICHES

Chop cold boiled chicken, add mayonnaise dressing and spread on bread and butter sandwiches.

Or, instead of mayonnaise, moisten with strong chicken broth and season with salt and pepper. Minced celery may be added.

BOSTON BROWN BREAD SANDWICHES

Steam Boston brown bread in one-half pound baking-powder cans. Butter and cut in thin slices and add a thin round of white bread. The combination of the two makes a pleasing variety.

CRACKERS—WAFERS—COOKIES

GUM GLUTEN CRACKERS

1 pound Gum Gluten Ground.
¼ pound butter.
Salt.
Sweetina.
Cold water.

Mix thoroughly the Gum Gluten Ground with the butter, add salt and Sweetina to taste. Add cold water to make a soft dough. Toss on floured board, roll thin, cut into shape, bake.

BRAN CRACKERS

1½ cups Educator wheat bran.
1½ cups sifted flour.
1 teaspoon cream of tartar.
½ teaspoon soda.
½ teaspoon salt.
4 tablespoons butter.
Milk.

Blend all ingredients, using enough cold milk to make a stiff dough. Roll to one-eighth inch thickness and cut with a small biscuit cutter. Great care is needed in baking that they do not burn and at the same time that they are thoroughly cooked.

They keep well a long time if put in a tin box.

They should be eaten at each meal if needed as purgative medicine.

GUM GLUTEN WAFERS

½ cup sweet cream.
1 saltspoon salt.
Gum Gluten Ground.

Add salt to the cream and add the Gluten gradually to make a stiff dough. Toss on a floured board and roll as thinly as possible and cut in strips with sharp knife or shape with a cutter. Bake in a buttered sheet in a slow oven until delicately browned.

GUM GLUTEN CHEESE WAFERS

1 cup Gum Gluten Ground.
3 tablespoons cream.
3 tablespoons grated cheese.
Yolks 2 eggs.
1 saltspoon salt.
Nutmeg.

Mix in order given, roll thin and bake.

BRAN COOKIES

3 cups Educator wheat bran.
3 cups improved graham flour.
½ cup molasses.
7 dessertspoons melted butter.

Sift dry ingredients, add molasses and melted butter. Roll on board slightly floured and cut with a round cutter half inch thick; bake in a moderate oven.

A perfect substitute for the above recipe is

DR. JOHNSON'S EDUCATOR BRAN COOKIE

as they possess all the virtues possible in such a product.

Like all the Educator Foods, this Cookie fully meets the requirements for which it was intended.

EDUCATOR CRACKERS.

None of nature's food values are eliminated from the cereals from which Educators are made, be it Wheat, Rye, Corn, Barley or Oats.

As no chemicals enter into their composition, it can readily be seen that these crackers constitute a perfect cereal diet.

(*See page* 328).

SALADS

The salad plants, such as lettuce, celery, water-cress, endives, etc., contain little nutriment, but are especially rich in mineral matter, and served uncooked in the form of salad, all this mineral matter is preserved. They are very valuable, as these mineral substances are necessary for the healthy condition of the blood and should form a large part of the daily diet.

Salads should not be eaten by dyspeptics or those having delicate bowels.

Salads should be prepared daintily, arranged attractively and always be served cold. Lettuce and other salad plants should be fresh, crisp, and dry. Wash thoroughly, on account of danger of germs from dust, soil, etc., chill in very cold water until crisp and dry by placing on a clean towel so that the water will drain from the leaves; or fold lightly in a towel and place on ice until serving time. Parsley is revived quickly by sprinkling with cold water and putting it into an air-tight fruit jar and keeping it in a cold place. Treated in this way it will keep fresh a long time.

Dressing should not be added to green vegetables until just before serving, as it tends to wilt them.

Meat to be used in salads should be free from skin and gristle, and should be cut into small cubes, mixed with French dressing and allowed to stand some time before combining with the vegetables.

A dainty salad served with a crisp cracker or cheese wafer forms an acceptable luncheon for the convalescent. It may also be served with dinner.

FRENCH DRESSING

1 tablespoon vinegar.
2 tablespoons Nicelle's olive oil.
⅓ teaspoon salt.
½ saltspoon pepper.

Mix all ingredients thoroughly and pour over salad just before serving.

BOILED DRESSING

1 teaspoon salt.
½ teaspoon mustard.
Speck cayenne.
2 tablespoons sugar.
1 egg.
½ cup milk.
2 tablespoons butter.
¼ cup vinegar.

Mix all dry ingredients. Beat egg in double boiler, add dry ingredients, butter and milk; cook over hot water, stirring constantly until thick like custard; add vinegar; cool and serve.

Note.—If it curdles, beat over cold water until smooth.

MAYONNAISE DRESSING

1 teaspoon mustard.
2 teaspoons powdered sugar.
1 teaspoon salt.
Speck cayenne.
Yolks 2 eggs.
1½ cups Nicelle's olive oil.
2 tablespoons vinegar.
2 tablespoons lemon juice.

Mix dry ingredients, add to yolks and mix thoroughly. Add a few drops of oil at a time until one-half cup is used, beating with egg-beater or wooden spoon. Then add alternately a few drops of vinegar and lemon juice and the remainder of the oil, using care not to lose the stiff consistency. It should be a thick dressing and not added to food until just before serving.

Note.—Have all ingredients and utensils thoroughly chilled and place mixing bowl in a pan of crushed ice while blending.

If dressing curdles, take another egg yolk and add the curdled mixture to it slowly, beating constantly.

CHICKEN SALAD

2 cups cut chicken.	1 saltspoon salt.
1 cup cut celery.	½ saltspoon pepper.
2 tablespoons Nicelle's olive oil.	1 tablespoon vinegar.
	2 tablespoons mayonnaise.

Mayonnaise, olives, celery leaves or white lettuce for garnishing.

Cut the cold chicken into small dice; cut the cleaned celery into small uniform pieces. Mix these together and pour over the oil. Mix well, then sprinkle with salt and pepper to taste; add the vinegar, blend and put in colander to drain; set in a cold place for two or three hours. Just before serving add the mayonnaise, put on a bed of lettuce and garnish.

Note.—Do not mince chicken.

MIXED SALAD

Equal proportions of green peas (cooked and drained), celery cut in thin slices and English walnuts cut into small pieces. Season with salt and pepper, add mayonnaise and serve on lettuce leaves. Garnish with ripe cherries on the stem with blanched hazel nuts put in place of stones.

WATER LILY SALAD

One hard-cooked egg. Cut in halves crosswise in fence fashion; remove yolk, put through strainer and refill white. Serve on shredded lettuce leaves and garnish with parsley. Serve with French, boiled or mayonnaise dressing.

MARGUERITE SALAD

One hard-cooked egg cut crosswise. Remove yolk. Cut white in slices, petal fashion, arrange on lettuce leaf like a marguerite and fill the center with the yolk put through the potato-ricer or strainer. Garnish with parsley and serve with French, boiled or mayonnaise dressing.

TOMATO SALAD

Take some medium sized tomatoes, cover with boiling water, remove skin and put in refrigerator until ready to serve. Then cut off top of tomato, scoop out a part of the inside and fill with finely cut celery mixed with boiled dressing or, better, with mayonnaise. Serve tomato on lettuce leaf and garnish with sprig of parsley.

SWEETBREAD SALAD

Mix equal parts of parboiled sweet breads cut into one-half inch cubes and celery cut into thin slices. Season with salt and moisten with mayonnaise dressing. Arrange daintily on lettuce leaves.

WALDORF SALAD

Mix equal parts of apples, pared and cut into small cubes, celery sliced in thin circles and English walnuts cut into small pieces. Season with salt and moisten with mayonnaise. Serve on lettuce leaf, garnished with a spoonful of whipped cream and halves of English walnuts or pecans.

CHEESE WAFERS

Butter wafer crackers and sprinkle thickly with grated cheese. Put in oven and bake till cheese is melted and crackers are a delicate brown. Arrange on small plate with doily. Serve with salad.

NUTRITIOUS DESSERTS

SOFT CUSTARDS, BAKED CUSTARDS, WHIPS AND SOUFFLES, JUNKET, CUSTARD, RICE, TAPIOCA AND BREAD PUDDINGS, PUDDING SAUCES

SOFT CUSTARD NO. I

Yolk 1 egg.	Speck salt.
1 tablespoon sugar.	½ cup milk.

Scald milk in double boiler. Beat yolk, add salt and sugar and pour on gradually the scalded milk. Pour back into double boiler and stir constantly until it looks creamy or it coats the spoon and the foam has disappeared; then remove immediately from hot water. Cool and add flavoring desired; Burnett's vanilla, orange or lemon extract.

Note.—If custard curdles, place saucepan over cold water and beat until smooth.

This custard is usually used for pudding sauces.

CUSTARD SUITABLE FOR A DIABETIC

2 eggs.	Speck salt.
Sweetina to taste.	1 pint milk.

Scald the milk and add the liquid Sweetina to taste; pour on to the well-beaten eggs. Cook and flavor as in preceding rule for soft custard or bake according to Cup Custard.

SOFT CUSTARD NO. III

1 cup milk.	½ saltspoon salt.
2 eggs.	¼ teaspoon Burnett's vanilla or grating of nutmeg.
2 tablespoons sugar.	

Reserve one egg white for meringue. Blend according to Soft Custard No. I.

MERINGUE

1 egg white.	2 tablespoons powdered sugar.
Speck salt.	Lemon or orange juice.

Beat the egg until stiff and dry; add the salt, sugar and lemon juice to taste. Beat very little after adding the sugar.

FLOATING ISLAND

Chill Soft Custard No. III; pour into serving dish and put meringue on top.

ORANGE CUSTARD

Peel, slice and remove seeds of oranges, put into serving dish, pour over Soft Custard No. III and put meringue on top.

BANANA CUSTARD

Peel bananas and slice very thin with silver knife; put into serving dish and flavor with lemon juice, pour on Soft Custard No. III and put meringue on top.

CREAM PUDDING

Line a glass dish with slices of stale cake and put in some salted almonds. Pour a little sherry wine on the cake. Chill Soft Custard No. III and pour over. Put meringue on top, with some salted almonds in it.

PEACH CUSTARD

Put into serving dish alternate layers of stale cake and slices of fresh or canned peaches. Chill Soft Custard No. III, pour over and put meringue on top.

APPLE CUSTARD

Cool baked apples and put in serving dish. Heap meringue on top and brown slightly in the oven. Serve with Soft Custard No. I.

BAKED CUSTARDS

BAKED OR CUP CUSTARD

1 cup milk.
1 egg.
1 tablespoon sugar.
½ saltspoon salt.

Flavoring to taste—nutmeg, cinnamon, Burnett's vanilla or lemon extract.

Scald the milk; beat egg, add sugar and salt and pour on gradually the scalded milk. Flavor to taste and pour into custard cups; place in deep pan and pour boiling water around until it almost reaches the top of cups. Bake in moderate oven about twenty minutes. If cinnamon is used for flavor, put one-half square inch into the milk when scalding.

Note.—To test when done, dip a pointed knife into water and plunge into the middle of the custard. If it looks set and the knife comes out clear, the custard is done; if milky, it is not cooked enough. If cooked too long the custard will curdle.

BAKED CUSTARD NO. II

⅔ cup milk.
1 egg.
1 tablespoon sugar.
⅓ saltspoon salt.
Nutmeg.
¼ teaspoon Burnett's vanilla.

Blend according to Baked Custard No. I.

The smaller quantity of milk makes a little firmer custard.

WHITE CUSTARD

1 egg white.
1 tablespoon sugar.
¼ saltspoon salt.
½ cup rich milk.

Beat white of egg until very light; add sugar and salt and pour on gradually the milk. Flavor with Burnett's vanilla, orange or lemon extract. Bake in cups set in pan of boiling water in a moderate oven about twenty minutes. When firm set on ice and serve cold. This may be taken by patient when the yolk of egg is prohibited.

CHOCOLATE CUSTARD

2 teaspoons Walter Baker's chocolate.
2 tablespoons milk.
6 tablespoons rich milk.
2 egg yolks.
2 teaspoons sugar.
Speck salt.

Grate chocolate and mix with the two tablespoons milk; stir over the fire until smooth, add the rich milk, the well-beaten egg yolks, sugar and salt. Pour into custard cups set in pan of hot water (nearly to the top). Cook until custard is set. Serve hot or cold.

Note.—The chocolate and yolk of egg contain a large amount of fat. Do not serve to a patient who cannot digest it.

MALTED MILK CUSTARD

2 tablespoons Horlick's Malted Milk.
2 egg yolks.
1 cup hot water.
Salt.

Mix the Malted Milk powder with enough of the hot water to make a smooth paste, add remainder of water and pour it gradually on to the well-beaten yolks. Butter custard cups, pour in the mixture and let it stand in a pan of boiling water in a moderate oven until custard is set.

BAKED CARAMEL CUSTARD

⅔ cup milk.
1 egg.
Speck salt.
2 tablespoons sugar.
A few drops of Burnett's vanilla.

Scald the milk. Put the sugar in a small saucepan, place over heat and stir constantly until the sugar is melted and a light brown color. Add milk and pour over the slightly-beaten egg. Add flavoring. Strain into buttered custard cups, place in a pan of hot water and bake until firm in a slow oven.

WHIPS AND SOUFFLÉS

Dainty and nutritious ways to serve the uncooked and slightly cooked white of eggs.

FRUIT WHIP

Any fruit, fresh, canned or dried (properly prepared), or jellies may be used.

2 to 4 tablespoons fruit pulp.	2 tablespoons powdered sugar (to taste).
White 1 egg.	
Lemon juice.	

Prepare the fruit pulp by scraping, grating or rubbing through a strainer. Beat the white of egg on platter until stiff. Add pulp, sugar and lemon juice to taste, and beat until very stiff. Heap in center of serving dish and pour Soft Custard No. I around it.

Note.—The apple is a favorite fruit for these whips. The juice of fresh fruits in season used with the raw white of egg makes an appetizing as well as a very nutritious lunch for the sick.

STRAWBERRY WHIP

1 cup fresh strawberries.	⅓ cup powdered sugar.
Whites 2 eggs.	

Wash and hull the strawberries and mash slightly. Beat whites of eggs until stiff, add sugar and berries; beat until very stiff, using a broad bowl and a wire eggbeater, beating with a long, steady stroke. Pile lightly on a glass dish and serve with white or sponge cake.

GRAPE WHIP

¾ cup Welch's grape juice.	5 tablespoons sugar.
White 1 egg.	1 cup double cream.

Beat the white of egg until foamy, add the grape juice mixed with the sugar and, lastly, the cream, then beat with a whip churn. Take off the froth as it rises and drain on a sieve. Pour the unwhipped mixture into small, high glasses and pile the whip on top. Serve cold.

OMELET SOUFFLÉ

Yolk 1 egg.
3 tablespoons powdered sugar.
2 tablespoons lemon juice.
Speck salt.
Whites 2 eggs.
Strawberry or fruit jam.

To the well-beaten yolk add the sugar, salt, lemon juice and rind. Beat the whites to the stiffest possible froth, then cut and fold into the yolk. Have ready a small baking dish, buttered and spread with a layer of the fruit; pour the omelet over it and bake in a moderate oven fifteen or twenty minutes. Test as for baked custard. Serve at once.

Note.—Do not use lemon rind if it will interfere medicinally.

CUSTARD SOUFFLÉ

¾ tablespoon butter.
1¼ tablespoons flour.
¼ cup scalded milk.
Yolk 1 egg.
1¼ tablespoons sugar.
White 1 egg.

Melt butter, add flour and gradually the scalding milk. Cook thoroughly, pour on to the well-beaten yolk, add sugar and cool. Fold into mixture the well-beaten white. Turn into buttered custard cups and bake about fifteen minutes, until firm—determined by pressing with the finger. Take from oven and serve at once, or it will fall. Serve with Foamy Sauce.

LEMON SOUFFLÉ

Yolk 1 egg.
Juice ¼ lemon.
¼ cup sugar.
White 1 egg.

Thoroughly beat yolk, add sugar slowly, beating constantly; add lemon juice. Fold in the white beaten until dry. Pour into buttered custard cups, set in pan of hot water and bake twenty minutes or until firm, testing by pressing with finger. Serve plain or with Foamy Sauce.

PEACH MERINGUE

1 cup yellow peaches.	Bread crumbs.
Sugar to taste.	White 1 egg.
Yolk 1 egg.	1 tablespoon powdered sugar.

Stew peaches in a very little water, sweeten to taste and stir in the well-beaten yolk. Butter a pudding dish and cover bottom with fine bread crumbs, put in the peaches and bake fifteen minutes. Cover with meringue made of white of egg and the powdered sugar; brown slightly in the oven. Serve cold.

JUNKET

Junket is a healthful and dainty dessert made simply of pure milk, and containing enough of the active principle of rennet found in the Junket Tablet to coagulate the milk. It is nutritious and has the added advantage of being easily digested.

Milk or cream that has been boiled, sterilized, condensed or evaporated cannot be used in making junket, and care must be taken not to heat the milk more than lukewarm, as hot milk spoils the action of the tablet.

For diabetic patients Sweetina may be used as a substitute for sugar in these recipes.

PLAIN JUNKET

1 cup milk.	¼ Hansen's Junket Tablet.
2 tablespoons sugar.	1 teaspoon cold water.
½ teaspoon brandy or wine.	

Heat the milk until lukewarm, add sugar and flavoring; when sugar is dissolved add the tablet dissolved in the cold water. Pour mixture immediately into sherbet cups or champagne glasses, partly fill. Stand in warm room undisturbed until firm like jelly, then put on ice to cool. Serve with whipped cream heaped on top, with one half teaspoon bright jelly for garnish.

Note.—For variety, whole strawberries or raspberries may be served with junket, or chopped English walnuts with the whipped cream. For garnish, candied cherries may be used.

If desired, the brandy and sugar may be omitted in making junket and served plain, with sugar and a grating of nutmeg.

CUSTARD JUNKET

- ½ cup hot milk.
- 1 egg.
- 2 tablespoons sugar.
- ¾ cup lukewarm milk.
- 2 tablespoons sugar.
- ¼ teaspoon vanilla.
- ½ Hansen's Junket Tablet.
- 2 teaspoons cold water.

Beat the egg, add two tablespoons sugar; pour on gradually the hot milk. Cook in top of double boiler; stir constantly until it thickens; take at once from the fire and cool. Mix two tablespoons sugar with the lukewarm milk, add to the *cooled* custard and blend thoroughly. When lukewarm add vanilla and the tablet dissolved in cold water; finish as for Plain Junket.

COCOA JUNKET

- 1 tablespoon cocoa.
- 2 teaspoons sugar.
- 2 tablespoons boiling water.
- 1 cup milk.
- ¼ Hansen's Junket Tablet.
- 1 teaspoon cold water.
- 3 drops vanilla.

Mix the cocoa, sugar, boiling water, and cook over heat and rub to a smooth paste; add gradually the fresh cool milk. Heat until lukewarm (not more), add vanilla and then tablet dissolved in the cold water. Finish as for Plain Junket and serve with sweetened cream or a Soft Custard.

COFFEE JUNKET

- 2 tablespoons boiled coffee
- 1 scant cup milk.
- 2 tablespoons sugar.
- ¼ Hansen's Junket Tablet.
- 1 teaspoon cold water.

Heat the milk until lukewarm, add the coffee and sugar; when sugar is dissolved add the tablet dissolved in the cold water. Finish as for Plain Junket.

CORNSTARCH PUDDING OR BLANC MANGE

Starch of various kinds is used in milk puddings. For children, invalids and dyspeptics such puddings are admirable. They must be thoroughly cooked, that the action of the heat may affect the starch. The combination of starch and milk gives a wholesome nutritive food, and the addition of eggs increases the food value.

CORNSTARCH PUDDING

1 cup milk.
1½ tablespoons cornstarch.
1½ tablespoons sugar.
Speck salt.
White 1 egg.
Burnett's vanilla.

Scald the milk. Mix cornstarch, sugar and salt thoroughly; add slowly the scalded milk, stirring constantly. Cook twenty minutes, stirring constantly for the first five or six minutes, then occasionally. Remove from fire and while very hot fold in lightly, but thoroughly, the well-beaten white of egg. When partially cooled add flavoring to taste; put into wet cups or moulds and let stand for several hours on ice. Remove from moulds. Serve with a soft custard, mashed fresh berries, or whipped cream. Vary the pudding by adding a little Walter Baker's chocolate, melted.

PINEAPPLE CREAM

1 cup milk.
1½ tablespoons cornstarch.
1½ tablespoons sugar.
Speck salt.
White 1 egg.
2 tablespoons grated pineapple.

Follow directions for Cornstarch Pudding, adding the pineapple instead of vanilla. Pour into individual moulds and serve cold with cream.

CORNSTARCH FRUIT JELLY

1 pint raspberry juice.
Sugar.
4 tablespoons (¼ cup) cornstarch.

Sweeten the juice to taste and heat to boiling. Make a smooth paste of the cornstarch and a little cold water, add slowly to the juice and cook thirty minutes, stirring constantly at first. Pour into cold, wet moulds. Serve cold with whipped cream and fresh, whole berries.

MALTED MILK BLANC MANGE

2 tablespoons Horlick's Malted Milk.
2 tablespoons powdered arrowroot.
Speck salt.
1 tablespoon sugar.
1½ cups boiling water.
¼ teaspoon vanilla.

Mix the arrowroot and Malted Milk powder with a little cold water into a smooth paste. Add the boiling water slowly, cook in double boiler about twenty minutes, or until arrowroot is thoroughly cooked, add vanilla and pour into cold, wet moulds. Chill and serve with Soft Custard or whipped cream.

Note.—One teaspoon powdered coffee may be added to above before cooking, for Coffee Blanc Mange.

NUTRITIOUS WHEAT PUDDING

1 cup milk.
2½ tablespoons flour.
Speck salt.
White 1 egg.
¼ teaspoon Burnett's vanilla.

Blend flour with a little of the cold milk. Scald remainder of milk and add flour mixture; cook thoroughly; add salt and flavoring and fold in the white of egg beaten slightly. Put into cold, wet mould and set in ice-box to harden. Serve with soft custard or whipped cream, or sprinkle with powdered sugar and pour over it one-fourth cup of fresh fruit juice or crushed fruit.

GUM GLUTEN PUDDING

3 tablespoons Gum Gluten Ground.
1 pint hot milk.
1 pint cold milk.
1 egg.
1 teaspoon butter.
1 saltspoon salt.
Cinnamon.
Sweetina.

Blend Gum Gluten Ground with a little of the cold milk, add gradually to one pint hot milk. Cook thoroughly. Beat egg, add cold milk, the cooked mixture and salt, cinnamon and Sweetina to taste. Bake thirty minutes. A little fruit improves the flavor. Serve with whipped cream.

IRISH MOSS JELLY

- ½ cup Irish moss.
- 2 cups boiling water.
- 4 figs.
- Juice 1 lemon or orange.
- ⅓ cup sugar.

Soak, pick over and wash the moss. Put it into the boiling water, add the figs cut into strips and *simmer* about twenty minutes, or until it is very thick when dropped on a cold plate. Add lemon juice and sugar. Strain into a cold, wet mould.

IRISH MOSS BLANC MANGE

- ¼ cup Irish moss.
- 1½ cups cold water.
- 1¾ cups milk.
- ¼ saltspoon salt.
- ⅓ teaspoon Burnett's vanilla.

Soak the moss in cold water about fifteen minutes. Remove from water, pick over and put into double boiler with the milk. Cook about twenty minutes, or until it thickens when dropped on a cold plate. Add salt, strain and flavor. Strain again and turn into small cold, wet moulds. Chill and serve with cream and sugar or sliced fruit.

RICE PUDDINGS

BOILED RICE

- 2 cups boiling water.
- 2 tablespoons rice.
- ½ teaspoon salt.

Wash rice; add gradually to the boiling salted water, so that water does not stop boiling. Cover and cook twenty minutes, or until grains are soft. Turn into a strainer and drain, then put in oven a few moments to dry, with oven door open. Serve with cooked dates and whipped cream, or plain with Soft Custard.

Note.—Keep rice well covered with water while cooking.

Dates.—Cut in small pieces, add a little water to partly cover and cook until soft. Simmer and do not stir.

STEAMED RICE

⅓ cup rice.
1 cup boiling water.
½ teaspoon salt.

Pick over the rice, wash in three or four waters; put it with the boiling water and salt in upper part of double boiler. Do not stir while cooking. Steam one hour, or until tender. Serve as a pudding with Soft Custard, or with sugar and cream.

PEACHES AND RICE

Serve boiled or steamed rice with sections of fresh, juicy peaches, or with fresh berries. Serve with sugar and cream.

SOUTHERN SNOWBALLS

¼ cup rice.
1 cup milk.
¼ teaspoon salt.

Pick over rice, wash in several waters and put with milk and salt in top of double boiler. Cook until the milk is absorbed and rice is tender. Do not stir while cooking. Dip egg cups in cold water and pack with rice carefully but tightly, turn out on serving dish, sprinkle with powdered sugar, put a candied cherry or a strawberry on top, and serve with whipped cream.

PLAIN RICE PUDDING

1 cup steamed rice.
1 cup scalded milk.
1 tablespoon butter.
1 egg.
2 tablespoons sugar.
½ saltspoon salt.
¼ cup stoned raisins.

Scald milk and add butter. Beat egg, add sugar and salt and pour on slowly the scalding milk. Put in pudding dish with rice and raisins. Put bits of butter on top and bake in a moderate oven until custard is set. Serve with Hard Sauce.

Note.—Do not use raisins in case of bowel trouble.

RICE MERINGUE

¼ cup cold cooked rice.
1 cup scalded milk.
2½ tablespoons sugar.
½ saltspoon salt.
Egg yolk.
Burnett's vanilla.
1 egg white.
2 tablespoons powdered sugar.

Blend rice and milk and soak until soft. Beat the yolk, add sugar and salt and gradually the hot milk and rice. Cook until it thickens like soft custard. Add flavoring to taste and pour into pudding dish or custard cups. Make a meringue of the white of egg and powdered sugar, cover the pudding and brown slightly in the oven.

CREAM OF RICE PUDDING

¼ cup rice (well washed)
2 tablespoons sugar.
1 saltspoon salt.
1 pint milk.

Mix all ingredients in a small baking dish. Bake two hours, slowly at first until rice is softened and thickened in the milk. Cut the crust several times, stirring to the bottom gently. The crust will then dissolve in the pudding, giving it a creamy color. Then let it brown slightly.

TAPIOCA PUDDINGS

TAPIOCA CREAM

1½ tablespoons granulated tapioca.
3 tablespoons sugar.
½ saltspoon salt.
1 cup scalded milk.
1 egg.
Flavoring.

Mix tapioca, sugar and salt; add slowly to the scalding milk and cook fifteen minutes. Add the yolk and white of the egg, beaten separately. Remove from fire and add flavoring desired. Serve plain or with any fresh fruit in season.

PLAIN TAPIOCA

1½ tablespoons granulated tapioca.
2 tablespoons sugar.
Salt.
1 cup scalded milk.
¼ cup raisins.
Nutmeg.

Scald milk in double boiler and gradually add the tapioca and sugar. Cook fifteen minutes. Add salt, nutmeg to taste and seeded raisins. Serve with cream and sugar.

Note.—Raisins should never be used in bowel trouble.

PINEAPPLE TAPIOCA

¼ cup granulated tapioca.
¼ cup sugar.
Speck salt.
1½ cups boiling water.
1 cup canned grated pineapple.

Mix tapioca, sugar and salt, pour on slowly the boiling water and cook in double boiler until clear, about fifteen minutes. Pour over the grated pineapple and decorate the top of the pudding with currant jelly.

APPLE TAPIOCA

¼ cup granulated tapioca.
1 tablespoon sugar.
Speck salt.
1 pint boiling water.
3 tart apples.
Sugar, nutmeg.

Mix tapioca, sugar and salt, pour on slowly the boiling water, and cook in double boiler fifteen minutes. Pour this onto the apples, which have been pared and cored and the holes filled with sugar and a little nutmeg. Cover the dish and bake one-half hour. Serve with cream and sugar.

RASPBERRY TAPIOCA

1½ tablespoons granulated tapioca.
1½ tablespoons sugar.
1 cup boiling water.
½ cup raspberry juice.
Juice ½ lemon.
Speck salt.

Mix tapioca, sugar and salt, pour on slowly the boiling water and cook in double boiler fifteen minutes.

Add raspberry and lemon juice. When it begins to jelly, beat smooth with a spoon. Serve plain or with whipped cream.

DATE TAPIOCA

1½ tablespoons granulated tapioca.
3 tablespoons sugar.
½ saltspoon salt.
1 cup scalded milk.
1 egg.
¼ cup chopped dates.

Mix tapioca, sugar and salt; add gradually the hot milk and cook in double boiler fifteen minutes. Add the beaten egg yolk and cook three minutes longer. Stir in the dates. Make a meringue of the white of egg, heap it on top and brown delicately in the oven.

CHOCOLATE OR COCOA BLANC MANGE

¼ cup granulated tapioca.
¼ cup sugar.
¼ teaspoon salt.
1½ cups hot chocolate or cocoa.
¼ teaspoon Burnett's vanilla.

Mix tapioca, sugar and salt; pour on gradually the hot cocoa and cook in double boiler about twenty minutes. Remove from heat, add vanilla and pour into cold, wet moulds. Serve cold, plain or with whipped cream or Soft Custard.

BREAD PUDDINGS

The principle of employing farinaceous matter which has already been subjected to heat (so that a considerable conversion of starch has gone on before the human salivary diastase comes into play) is carried out in practice in the form of bread puddings.

PLAIN BREAD PUDDING

1 cup stale bread.
1 cup milk.
1 tablespoon butter.
1 egg.
2 tablespoons sugar (to taste).
½ saltspoon salt.
¼ cup seeded raisins.

Scald milk and add butter. Beat the egg and add sugar and salt; pour on gradually the scalding milk. Cut the bread into one-half inch cubes and add, with the raisins. Pour into well-buttered pudding dish, put bits of butter on top and bake in a moderate oven until the custard is set. Serve with hard sauce or cream and sugar.

Note.—Do not serve raisins in bowel trouble.

ORANGE BREAD PUDDING

1 cup stale bread.	2 oranges.
½ cup milk.	Sugar to taste.
2 eggs.	

Soak bread in the milk until soft and beat lightly with fork; add the grated rind of one orange and the juice of both; sweeten. Beat the whites very light and add to above mixture. Pour into custard cups and cook as for baked custard—about fifteen or twenty minutes. Serve plain or with Hard Sauce.

Note.—Omit orange rind if it will interfere medicinally.

LEMON BREAD PUDDING

½ cup milk.	3 tablespoons sugar.
½ cup soft bread crumbs.	½ tablespoon butter.
Yolk 1 egg.	Grated rind ¼ lemon.

Scald milk and add butter. Beat the egg yolk, add sugar and salt and pour on gradually the scalded milk. Add the bread crumbs and grated lemon rind; pour into a buttered pudding dish and bake in a moderate oven about fifteen minutes, or until set like baked custard.

Make a meringue by beating the white of egg very stiff, adding two tablespoons powdered sugar and juice of one-fourth lemon. Cover the pudding with it and set in the oven till a dainty brown.

Note.—Do not use lemon rind if it will interfere medicinally.

JELLY BREAD PUDDING

Prepare the same as for Lemon Bread Pudding, omitting the lemon rind and juice. Spread any tart jelly over pudding when baked and add meringue.

CHOCOLATE BREAD PUDDING

1 cup stale bread crumbs.
1 cup milk.
¾ ounce (or square) Walter Baker's unsweetened chocolate.
2½ tablespoons sugar.
1 egg.
Speck salt.
¼ teaspoon vanilla.

Soak bread crumbs in milk. Melt chocolate over hot water and add to it the sugar and salt. To the soaked crumbs add the chocolate mixture, the beaten egg and vanilla. Put into buttered custard cups and bake in a moderate oven about twenty minutes, or until custard is set. Serve hot, plain or with Hard Sauce.

CHEESE PUDDING (GUM GLUTEN)

2 eggs.
1 cup milk.
¾ cup cheese.
1 cup Gum Gluten bread crumbs.
Speck soda.
1 tablespoon butter.
Salt.
Cayenne.

Dry the bread, roll and soak a short time in the milk. Beat the eggs lightly, add the milk and crumbs, grated cheese, salt and cayenne pepper to taste. Beat well, pour into buttered pan and bake in a hot oven half an hour. Serve immediately, as five minutes' delay will spoil.

CRACKER PUDDINGS

CRACKER PUDDING

3 soda crackers.
1 pint milk.
¼ teaspoon salt.
Yolks 2 eggs.
4 tablespoons sugar.

Roll the crackers and soak in the milk. Beat yolks and sugar well together and add to pudding with salt.

Bake one-half hour. Make a meringue with the whites of the eggs, pile lightly on top and put in oven till golden brown. Serve hot.

GLUTEN CRACKER PUDDING

Dip Gluten crackers in boiling water; place, without breaking, in a small, shallow dish or saucer; spread with butter, mixed mustard, salt and red pepper; cover with grated cheese and bake.

SWISS PUDDING (GUM GLUTEN)

1 cup milk.	Salt, cayenne.
1 teaspoon Gum Gluten cracker or bread crumbs.	

Mix ingredients, pour into custard cups and bake as for baked custards.

PUDDING SAUCES

HARD SAUCE

3 tablespoons butter.	½ white of egg.
6 tablespoons powdered sugar.	½ tablespoon cream.
Nutmeg.	

Cream butter; add sugar gradually. When light and creamy add the unbeaten white of egg and the cream, a drop or two at a time. Season highly. Heap on serving dish and cool.

FOAMY SAUCE

¼ cup butter.	½ egg.
½ cup powdered sugar.	1 tablespoon wine.

Cream butter; add sugar gradually, the well-beaten egg and the wine. Heat over hot water, beating constantly. Serve immediately.

TO WHIP CREAM

Do not have cream too thick; season with sugar and any flavoring desired; put in bowl and set bowl in another utensil containing a little cold water and ice. Beat cream with Dover egg-beater until stiff enough to keep its form. Set on ice to keep cold.

Note.—Do not beat too long or it may turn to butter. To one-half cup thick cream add three tablespoons milk.

WHIPPED CREAM NO. II

Follow the above recipe, and add the white of one egg beaten stiff, folding it into the stiffly-beaten cream.

FRUIT SAUCE

6 tablespoons fruit juice.	½ teaspoon arrowroot or cornstarch.

Blend starch with a little cold water and pour into the hot fruit juice. Boil two or three minutes. Sweeten if desired.

GELATIN

Gelatin is derived from collagen, which is the chief constituent of connective tissue and is converted into gelatin by boiling. It is a colorless, tasteless substance, and has the property of solidifying into a jelly on cooling. Gelatin is insoluble in cold water, soluble in hot water and after much boiling will not solidify on cooling.

It is an albuminoid in chemical composition, and therefore is rich in nitrogen.

It cannot, however, replace albumin in the repair of tissue waste, as it rapidly undergoes change in the body and is eliminated as urea.

But because it undergoes changes so rapidly and easily in the body, it may be taken as a substitute for albuminates when stronger foods containing albumin cannot be tolerated.

It is valuable in cases of fever, as the fever feeds on the gelatin, saving much tissue waste. And also for the convalescent where the portion of the system in which gelatin is needed has been wasted.

"Gelatin has the advantage of fixing a good deal of acid in the process of digestion, and is thus of service in cases of hypersecretion of acid in the stomach. It seems also to belong to the peptogenic substances—*i.e.*, those bodies which favor an abundant flow of gastric juice." Hutchison.

WINE GELATIN

½ box shredded gelatin or
2 tablespoons granulated gelatin.
½ cup cold water.
1½ cups sugar.
2 cups boiling water.
1 cup wine.
Speck salt.

Cover gelatin with the cold water and let it stand about one-half hour. Add the boiling water, sugar and salt. Stir till gelatin is dissolved and add the wine. Strain through cloth and strainer into cold, wet moulds and set in cold place to harden. Serve plain or with whipped cream.

WINE GELATIN

(Individual Rule.)

- 1 teaspoon granulated gelatin.
- 1 tablespoon cold water.
- ¼ cup boiling water.
- 2 tablespoons sugar.
- 2 tablespoons wine.
- 1 tablespoon orange juice.
- 1 teaspoon lemon juice.

Soak gelatin in the cold water until soft; add the boiling water and dissolve. Add sugar, wine, orange and lemon juice. When sugar is dissolved, strain through a cheese-cloth into cold, wet moulds. Chill in shallow soup plate. When firm cut into one-half inch cubes and serve in sherbet or champagne glasses, or half orange shell with a little whipped cream on top.

ORANGE GELATIN

- ½ box shredded gelatin or
- 2 tablespoons granulated gelatin.
- ½ cup cold water.
- 2 cups boiling water.
- 1 cup sugar.
- 1 cup orange juice.
- Juice 1 lemon.

Soak the gelatin in the cold water one-half hour; add the boiling water and dissolve. Add sugar and fruit juice, strain through a cloth and strainer into cold, wet moulds and set away to harden. Serve plain or with whipped cream.

ORANGE GELATIN

(Individual Rule.)

- 1 teaspoon granulated gelatin.
- 1 tablespoon cold water.
- 1 tablespoon boiling water.
- 3 tablespoons orange juice.
- 2 teaspoons lemon juice.
- 2 tablespoons sugar.

Make same as preceding.

Cut orange in half, crosswise, remove pulp with spoon and strain through cheesecloth. Fill halves with jelly; when it is hardened cut with sharp knife into thirds (which leaves the rim filled with jelly). Serve three pieces on small plate with whipped cream in center.

ORANGE CHARLOTTE

(Individual Rule.)

2 teaspoons gelatin.
1 tablespoon cold water.
⅓ cup boiling water.
⅓ cup sugar.
3 tablespoons orange juice.
1 tablespoon lemon juice.
Whites 2 eggs.

Blend as for Orange Gelatin and set the bowl into chopped ice or ice-water to cool; stir occasionally. When jelly is quite thick, fold in the stiffly-beaten whites of eggs. Mix well and pour into cold, wet moulds. Put on ice to harden. When firm, remove by dipping mould quickly in warm water; loosen with knife, allowing air to enter. Serve with Soft Custard No. 1.

LEMON GELATIN

(Individual Rule.)

1 teaspoon granulated gelatin.
1 tablespoon cold water.
¼ cup boiling water.
2 tablespoons lemon juice.
2 tablespoons sugar.

Soften gelatin in the cold water; add the boiling water, sugar and fruit juice. When the sugar is dissolved, pour into cold, wet moulds and put on ice to harden.

SNOW PUDDING

¼ box shredded gelatin or
1 tablespoon granulated gelatin.
¼ cup cold water.
1 cup boiling water.
1 cup sugar.
¼ cup lemon juice.
Whites 3 eggs.
1 teaspoon Burnett's lemon extract.

Soften gelatin in cold water, add boiling water and dissolve. Add sugar, fruit juice and extract, and stir until sugar is dissolved. Set bowl into chopped ice, or ice water, to cool, stirring occasionally; when jelly is quite thick fold in the stiffly-beaten whites of eggs, and put into cold, wet moulds. Put on ice to harden. When firm, remove from mould and serve with Soft Custard No. 1.

SNOW PUDDING

(Individual Rule.)

2 teaspoons granulated gelatin.
3 tablespoons cold water.
⅓ cup boiling water.
1½ tablespoons lemon juice.
3 tablespoons sugar.
White 1 egg.

Make same as preceding.

SPANISH CREAM

¼ box shredded gelatin or
1 tablespoon granulated gelatin.
¼ cup cold water.
½ cup boiling water.
2 cups milk.
Yolks 3 eggs.
6 tablespoons sugar.
¼ teaspoon salt.
Whites 3 eggs.
1 teaspoon Burnett's vanilla.

Soften the gelatin in the cold water, add the boiling water and dissolve. Heat the milk in a double-boiler. Beat the yolk of eggs, add sugar and salt, and pour the hot milk gradually onto the mixture. Return to double-boiler and cook until it thickens, stirring constantly. Add the strained gelatin and the flavoring, and fold in carefully the well-beaten whites. Pour into cold, wet moulds to harden. Serve with Soft Custard No. 1, or with Whipped Cream.

SPANISH CREAM

(Individual Rule.)

1 teaspoon granulated gelatin.
1 tablespoon cold water.
3 tablespoons boiling water.
⅔ cup milk.
Yolk 1 egg.
2 tablespoons sugar.
Speck salt.
White 1 egg.
¼ teaspoon Burnett's vanilla.

Make same as preceding, and serve with Orange Sauce.

ORANGE SAUCE

Beat white of one egg very light, add two tablespoons sugar gradually, beating constantly, then add one and one-half tablespoon orange juice and one teaspoon lemon juice.

GRAPE GELATIN

1 tablespoon granulated gelatin.
¼ cup cold water.
1 cup boiling water.
½ cup sugar.
Juice 1 lemon.
½ cup Welch's grape juice.

Soften gelatin in the cold water; add boiling water and dissolve. Add sugar, lemon juice and grape juice; strain, pour into cold, wet moulds and cool.

This recipe may be served in another and very inviting form; when the gelatin is firm, force it through a potato ricer. Keep on ice until ready to serve.

GRAPE FLUFF

¼ box shredded gelatin or
1 tablespoon granulated gelatin.
¼ cup cold water.
¾ cup sugar.
1 cup Welch's grape juice.
Juice 1 lemon.
Whites 3 eggs.

Soften the gelatin in cold water and dissolve by standing the dish in hot water. Dissolve the sugar in the fruit juice, and strain the gelatin into it. Set in ice and water, and stir occasionally until the mixture begins to thicken, then add gradually the well-beaten whites of eggs, and beat until the whole is very light and stiff enough to hold its shape. Pile lightly in glass serving-dish, or mould and serve with Whipped Cream, or a Soft Custard.

CREAM GELATIN

1 teaspoon granulated gelatin.
1 tablespoon cold water.
3 tablespoons scalded milk.
4 tablespoons thick cream.
1 tablespoon sugar.
Speck salt.
Vanilla to taste.

Soften the gelatin in the cold water and dissolve in the scalded milk. Add the sugar, salt, cream and vanilla. Stir occasionally until the mixture thickens;

pour into cold, wet after-dinner coffee cups, or egg cups, and chill. Serve with Soft Custard, or cream and sugar.

PEACH GELATIN

1 teaspoon granulated gelatin.
1 teaspoon cold water.
1 tablespoon boiling water.
3 tablespoons peach juice.
1 teaspoon lemon juice.
1 tablespoon sherry wine.
1½ tablespoons sugar.

Soften the gelatin in the cold water and dissolve in the boiling water. Add fruit juice, wine and sugar, strain and pour into a cold, wet mould.

ORANGE BASKETS

Wash oranges. Remove two sections from the upper half of an orange, leaving a band of peel for a handle. Dig out the pulp and scrape clean. Fill with lemon or orange jelly, cut into cubes. An attractive form to serve to children.

Note.—If these shells are wrapped in a damp cloth they will retain their shape for hours.

COFFEE GELATIN

(Individual Rule.)

1 teaspoon granulated gelatin.
1 tablespoon cold water.
2 tablespoons strong hot coffee.
2 tablespoons sugar.
7 tablespoons cream.

Soften the gelatin in the cold water and dissolve in the hot coffee; add sugar and strain. Set bowl into chopped ice, or ice water to cool, stirring occasionally until it thickens. Then add the cream, and pour into cold, wet moulds to chill.

STRAWBERRY MOUSSÉ

¼ box shredded gelatin or
1 tablespoon granulated gelatin.
¼ cup cold water.
¼ cup boiling water.
1 pint thick cream.
½ cup powdered sugar.
1 cup strawberry juice.

Soften the gelatin in the cold water; add the boiling water and dissolve. Whip the cream until stiff, and add the powdered sugar. To the gelatin add the strawberry juice, fold the cream in carefully, turn into a wet mould and pack in salt and ice for two hours. When ready to serve, turn out of mould onto a large glass dish and garnish with fresh strawberries and whipped cream.

JELLIES

ALBUMINOUS—STARCHY

CALF'S FOOT JELLY

1 calf's foot.	Juice 3 lemons.
1½ quarts cold water.	3 whites and shells of eggs.
1 cup cold water.	½ cup sugar.
1 wineglass sherry wine.	

Put the calf's foot and cold water on to boil, bring slowly to boiling point, and boil five hours, skim often while cooking. Strain through fine sieve, and allow to stand until firm and remove the fat.

Mix one cup of cold water, lemon juice, wine, the whites and shells of eggs, sugar, and beat all together until sugar is dissolved, then add the jelly. Place on the fire in an enameled stewpan, and stir constantly until the mixture is very hot, but not boiling; strain twice through two thicknesses of cheese-cloth and pour into moulds.

Note.—The several varieties may be made by substituting the different flavors, brandy, rum, port wine, champagne, orange or lemon juice.

CHICKEN BROTH JELLY

A fowl weighing about five pounds should be prepared according to recipe for Chicken Broth, and cooked at the simmering point twelve hours. The fluid should be strained while hot through a fine sieve. It should then be allowed to cool in an earthen jar for twelve hours in the ice chest. The resulting jelly can be used in full strength, or diluted with water. When the jelly has been thoroughly cooled the fat can be either partially or entirely removed from the top.

Note.—Mutton Broth Jelly may be treated in the same way.

PANOPEPTON JELLY WITH ORANGE

½ small box best gelatin.
1 tablespoon sugar.
6 tablespoons Panopepton.
Juice and peel of 1 orange.
1 pint cold water.

Put the gelatin, orange peel (cut in small pieces), orange juice, and cold water in a dish and let it stand for one hour, then put in a double boiler on the fire, add the sugar and stir until it is dissolved; now strain through linen, add the Panopepton and stir well. Pour into a jelly-jar and set near ice. Serve in small quantities.

PANOPEPTON JELLY

1 ounce fresh celery (cut in small pieces).
½ small box best gelatin.
¼ teaspoon salt.
2 dashes pepper.
6 tablespoons Panopepton.
2 cups cold water.

Soak the gelatin in one-half cupful of cold water for one hour; put the water and celery in a double boiler on the fire and simmer one-half hour; add the salt, pepper, and soaked gelatin and stir until it is dissolved; remove from fire, add Panopepton; stir, and strain through linen into a jelly-jar, and set near ice. Serve in small quantities.

RICE JELLY

1½ tablespoons rice.
1 cup cold water.
Speck salt.
⅔ cup milk.
1 white of egg.

Wash the rice and soak in cold water two hours, drain off the water and add the milk, cook in double boiler one and one-half hours. Strain through a fine sieve. Pour into moulds, chill and serve with fruit juice or cream and sugar.

TAPIOCA JELLY

4 tablespoons pearl tapioca.	⅔ cup barley water.
1 cup cold water.	Speck salt.

Soak tapioca in cold water three hours; add boiling water and salt; cook in double boiler two and one-half hours. Serve hot, plain with cream, wine and powdered sugar, or flavor while hot with lemon juice, and chill.

BARLEY JELLY

3 tablespoons pearl barley.	¼ teaspoon salt.
1 quart cold water.	

Soak barley over night, drain and add the quart of fresh water; add salt; and cook in double boiler steadily for four hours down to one pint, adding water from time to time; strain through muslin. When cold this makes a thick jelly. Two tablespoons dissolved in eight ounces of warmed and sweetened milk may be given at single feeding.

BREAD JELLY

Pour boiling water on stale bread and let it soak for an hour. Pour off the water and add fresh water and boil down until a thick mass is obtained which becomes jelly-like on cooling, and may be eaten with milk or cream and sugar.

CAKE

SPONGE CAKE

4 eggs.
1 cup powdered sugar.
¾ cup bread flour.
½ teaspoon salt.
1½ teaspoons baking powder.
Rind and juice of ½ lemon.

Beat eggs separately, very light. To the yolks add the sugar and lemon, sift in carefully the flour and beat about five minutes. Then fold in the whites. Bake in a well-greased and floured angel cake tin in a moderate oven. Cake is done if when tested with a fine (washed) knitting needle it comes out clear, or when the cake shrinks from the pan.

COLD WATER SPONGE CAKE

2 eggs.
1 cup sugar.
6 tablespoons cold water.
1⅓ cups bread flour.
2 teaspoons Royal baking powder.
1 tablespoon lemon juice.

Beat the yolks and whites separately. To the yolks add the sugar and beat well; add lemon juice and cold water; sift flour and baking powder together three times and add gradually, beating thoroughly.

Fold in the well-beaten whites. Bake in well-greased and floured gem tins, or shallow pan in a moderate oven.

HOT WATER SPONGE CAKE

2 eggs.
1 cup sugar.
1 cup bread flour.
1¼ teaspoon baking powder.
½ saltspoon salt.
½ teaspoon Burnett's vanilla.
½ cup boiling water.

Beat the eggs very light, add the sugar; sift dry ingredients together and add gradually; add flavoring and beat well. Lastly add the boiling water, and bake in well-greased and floured gem tins, or shallow pan, in a moderate oven.

PLAIN CAKE

2 eggs.
½ cup milk.
1 cup sugar.
1½ cups bread flour.
4 tablespoons butter.
2 teaspoons Royal baking powder.
1 teaspoon flavoring or spices.

Line the pan with buttered paper; separate eggs. Cream the butter, add the sugar gradually, add the well-beaten yolks and flavoring. Add alternately the milk and the flour with the baking powder sifted in it. Beat well and fold in the stiffly-beaten whites. Put at once in a well-lined and greased pan, and bake in a hot oven about thirty minutes, or until it shrinks from the pan, or until a fine (washed) knitting needle comes out dry.

The cake may be varied by adding one-fourth cup currants, or a few raisins and a little citron, or mixed spices, or a little melted chocolate.

GUM GLUTEN NUT CAKE

1 tablespoon butter.
Yolks 2 eggs.
Whites 2 eggs.
⅔ cup sour milk.
1 teaspoon soda.
½ teaspoon Sweetina.
Salt and spices.
1 cup nut meats.
Gum Gluten Ground.

Cream the butter, add the well-beaten yolks and Sweetina syrup, then the sour milk in which the soda has been blended. Add Gum Gluten Ground gradually to make a stiff batter; season with salt and spices and add nut meats. Bake in moderate oven.

BOILED FROSTING

1 cup sugar.
¼ teaspoon Stickney & Poor's Cream of Tartar.
⅓ cup cold water.
¼ teaspoon flavoring.

Boil without stirring until it threads from spoon, and gradually pour on to the well-beaten white of egg. Add any flavoring to taste. Beat until thick and spread quickly. A little chocolate may be added for variety, or chopped nuts or cocoanut, etc.

MARGUERITE WAFERS

Take " Long Branch " wafer crackers and spread with plain-boiled frosting, or add nuts, chocolate, cocoanut, etc. Put in oven a moment to dry, but not brown. Dainty to serve with Ice Cream, Ices and Sherbet.

GINGER BREAD

1 egg.
1 cup molasses.
7 tablespoons melted butter.
1 teaspoon soda.
½ cup boiling water.
1 teaspoon Stickney & Poor's ginger.
2 cups bread flour or
2¾ cups pastry flour.

Beat egg in mixing bowl; add molasses, melted butter, and gradually one cup of flour. To the remaining flour add the soda and ginger, sift and add to mixture; beat well and add the boiling water. Bake in well-greased and floured gem tins, or shallow pan, in a hot oven about twenty minutes. Test with a fine (washed) darning needle, when it comes out clear, or the cake shrinks from the pan the cake is done.

FROZEN DESSERT

ICE CREAM—SHERBET—ICES

Frozen dishes constitute an acceptable form of serving nutriment and liquid, such as milk, cream, fruits and water.

Care should be taken not to serve them when they will interfere with ptyalin digestion. Remember that the body temperature especially promotes the process of digestion. Ice, ice-water, and iced foods will hinder the formation of saliva and lessen the activity of ptyalin digestion, and should not be given to the sick when such functions are demanded of the system.

Junket principle greatly enhances the digestibility and healthfulness of ice cream.

GENERAL RULES FOR FREEZING

Ice (or snow) and salt are required for the process of freezing. The salt melts the ice, and in melting absorbs heat from the mixture, thus causing it to freeze. The finer the ice, the more quickly the freezing will be accomplished. In packing a freezer allow three level measures of ice to one of salt. This proportion is found best for fine-grained mixture. The can should not be filled more than three-fourths full, as the liquid expands in freezing, and if over-crowded, the cream will become coarse-grained and the cover may be pushed up allowing the salt water to get in.

FREEZING IN SMALL AMOUNTS

Put mixture to be frozen into a water-tight baking powder can, or a small tin pail with cover, and stand in large pail or bowl. Pack the ice and salt alternately under and around it (ice pounded fine), using one part salt to three parts ice. Remove cover, and beat mixture with Dover egg-beater until foamy, replace cover and turn can, or pail, back and forth; remove cover occasionally and scrape the frozen mixture from side of can, and beat thoroughly with fork. The mixture will freeze in twenty minutes. When frozen, place a narrow strip of cloth, dipped in melted beef fat or lard, around the outside of cover to keep out the salt water. Repack in ice, or ice and salt, and cover well until wanted.

Serve frozen dishes in sherbet, champagne, or high glasses; pass on small plate covered with doily, and at the side of the plate a small cake, wafer or a few orange straws may be added; a rose will add to the attractiveness.

ICE CREAM

VANILLA ICE CREAM

1 cup cream or part milk.
3 tablespoons sugar.
½ teaspoon Burnett's vanilla.
Speck salt.

Blend all the ingredients; when sugar is dissolved, freeze in a small pail according to general directions.

CHOCOLATE ICE CREAM

1 cup cream or part milk.
½ square Walter Baker's chocolate.
2 tablespoons boiling water.
3 tablespoons sugar.
½ teaspoon vanilla.
Speck salt.

Melt the chocolate over hot water, add the boiling water, sugar and hot cream. Cool, add vanilla and salt and freeze in small pail according to general directions.

COFFEE ICE CREAM

1 cup cream or part milk.
2 tablespoons ground coffee.
½ cup milk.
3 tablespoons sugar.
Speck salt.

Mix coffee and milk, put into double-boiler and cook five minutes. Strain through cheese-cloth and strainer; add sugar, salt and cream. Cool and freeze in small pail, according to general directions.

JUNKET ICE CREAM

½ cup cream.
½ cup milk.
2½ tablespoons sugar.
⅓ Hansen's Junket Tablet.
2 teaspoons cold water.
⅔ teaspoon vanilla.

Heat the milk until lukewarm, add the sugar and vanilla; when sugar is dissolved add the tablet dissolved in the cold water. Allow it to stand in warm room until firm, then beat thoroughly and turn into small pail and freeze according to General Rule.

Note.—A variety may be made by adding two teaspoons cocoa dissolved in a little boiling water. Add to mixture before adding the tablet. Serve the creams plain or with whole strawberries, etc.

Note.—The junket improves the body or consistency of any cream.

GRAPE JUICE ICE CREAM

1 cup cream.
½ cup Welch's grape juice.
½ cup sugar.

Scald one-half cup of the cream and add the sugar. Cool, add remainder of cream and the grape juice and freeze according to general directions.

STRAWBERRY ICE CREAM

½ cup cream.
½ cup milk.
1 pint box strawberries.
¼ cup sugar.

Mash the strawberries with the sugar and allow them to stand five minutes. Add the cream and milk and freeze in small pail according to general directions.

Note.—The berries may be mashed and strained through cheese-cloth.

RASPBERRY ICE CREAM

½ cup cream.
½ cup milk.
½ pint raspberries.
¼ cup sugar.

Mash the raspberries and strain through cheese-cloth. Add cream, milk and sugar. Freeze in small pail according to general directions.

PEACH ICE CREAM

½ cup cream.
½ cup milk.
½ cup peaches.
¼ cup sugar.

Mix peaches and sugar and press through a potato ricer or sieve. Scald cream and milk. Cool and add peaches and sugar. Freeze in small pail according to general directions.

MALTED MILK ICE CREAM

½ pound Horlick's Malted Milk.
1 cup granulated sugar.
1 quart water.
White 1 egg.
1 pint cream.
2 ounces chocolate.
1 tablespoon vanilla.

Mix the malted milk powder, sugar and boiling water, stirring until smooth. Add cream and scraped chocolate and cook until chocolate is melted. Add vanilla, cool and freeze. When partly frozen, add the well-beaten white of egg, and finish freezing.

Note.—If strawberry or other flavor is desired, it may be used in place of vanilla.

CARAMEL ICE CREAM

½ cup cream.	2 tablespoons caramel.
½ cup milk.	4 teaspoons sugar.

To prepare caramel, melt one-fourth cup granulated sugar in a sauté pan, stir until it melts and is a light brown color, then add gradually four tablespoons boiling water and cook three minutes longer.

To prepare the ice cream: Mix all the ingredients together and freeze according to general directions.

CARAMEL ICE CREAM NO. II

1 pint milk.	2 eggs.
1 cup sugar.	Speck salt.
7 tablespoons flour.	1 quart cream.
1 scant cup sugar for caramel.	

Scald the milk; mix one cup sugar, flour and salt, add the eggs and beat all together until perfectly smooth and light. Add the scalding milk gradually, beating until very smooth. Cook in double boiler twenty minutes.

While cooking, prepare caramel. Put the second cup of sugar in sauté pan, and cook until melted and a delicate brown; add gradually the custard, stirring constantly; strain and cool. Add the cream (which has been scalded and cooled) and freeze in large freezer.

Note.—This may be used for vanilla ice-cream by omitting the caramel and using one tablespoon Burnett's vanilla and enough of the second cup of sugar to sweeten.

FROZEN CUSTARD

1 cup hot milk.
1 egg.
¼ teaspoon Burnett's vanilla.
Speck salt.
2 tablespoons sugar.

Beat the egg, add the sugar and salt and gradually the scalded milk. Cool, add flavoring and freeze.

HOT COCOA SAUCE FOR ICE CREAM

1½ cups water.
1 cup sugar.
1 tablespoon arrowroot.
Speck salt.
2 tablespoons Walter Baker's cocoa.
1 teaspoon vanilla.

Boil together the water and sugar for two minutes; add the arrowroot mixed with a little cold water, stir for a moment, then boil until clear. Add the cocoa, which has been mixed with a little hot water, and the salt, and boil three minutes longer. Remove from the fire and add the vanilla.

SHERBET

LEMON MILK SHERBET

1 cup milk.
½ cup sugar.
Juice of ½ lemon.
2 drops Burnett's lemon extract.

Blend all the ingredients and freeze in small pail according to general directions.

LEMON MILK SHERBET NO. II

1 quart milk.
1 pint sugar.
Juice 2 lemons.
1 teaspoon Burnett's lemon extract.

To the lemon juice add the sugar, milk and extract. Freeze immediately in large freezer.

STRAWBERRY SHERBET

1 cup milk.
1 pint strawberries.
½ cup sugar.

Mash the berries and strain. To the juice add sugar and milk. Freeze in small pail according to general directions.

STRAWBERRY SHERBET NO. II

1 quart milk.
2 quarts strawberries.
2 cups sugar.

Mash the berries and strain. Add sugar and milk. Freeze in large freezer.

MALTED MILK SHERBET

½ pound Horlick's Malted Milk.
1 cup granulated sugar.
3 pints water.
1 tablespoon vanilla.
2 ounces chocolate.
White 1 egg.

Make a smooth paste of the malted milk powder and a little of the water, then add the rest of the water gradually, the sugar, vanilla and the chocolate grated.

Freeze. When partly frozen, add the well-beaten white of egg and finish freezing.

GRAPE SHERBET

3 cups Welch's grape juice.
1 quart water.
3 cups sugar.
White 2 eggs.

Blend the grape juice, water and sugar. Partly freeze. Beat the whites of eggs lightly, add two tablespoons powdered sugar; add to sherbet and continue freezing until hard. Remove dasher and allow it to stand for one hour to ripen. Pack carefully.

GRAPE AMBROSIA

1 quart milk.
2 quarts water.
3½ cups sugar.
Whites 4 eggs.
1 pint Welch's grape juice.
1 can grated pineapple.
Juice 3 lemons.

Mix together milk, water, sugar and fruit and partially freeze. Add the well-beaten whites of eggs and continue freezing until hard.

CLAM SHERBET

¾ cup milk.
¼ cup Burnham's Clam Bouillon.
Speck paprika.

Blend and freeze according to General Rule. Serve in small dainty glasses with a teaspoon of unsweetened whipped cream on top. The milk and clam taken in this way are often more acceptable to the patient than when served in liquid form.

Note.—The paprika may be omitted if condiments are not desirable.

ICES

ORANGE ICE

½ cup water.
Juice 1½ oranges.
1 tablespoon lemon juice.
¼ cup sugar.

Mix together all the ingredients and freeze in small pail according to general directions.

ORANGE ICE NO. II

2 tablespoons shredded gelatin.
½ cup cold water.
1½ cups boiling water.
1 cup sugar.
1 cup orange juice.
Juice 1 lemon.

Soak gelatin in the cold water twenty minutes; add boiling water; when gelatin is dissolved add the sugar, orange and lemon juice. Cool, strain and freeze in large freezer.

ORANGE ICE NO. III

1 pint orange juice.
Juice 2 lemons.
1 pint sugar.
Grated rind 1 orange.
1 quart water.

Boil the water and sugar twenty minutes; add fruit juice and rind of orange. Cool, strain and freeze in large freezer.

Note.—Do not use orange rind if it will interfere medicinally.

LEMON ICE

½ cup water.
Juice 1 lemon.
4 tablespoons sugar.

Mix all the ingredients and freeze in small pail according to general directions.

FRUIT ICE

1 banana.
⅔ cup strawberries.
Juice 1 orange.
Juice 1 lemon.
1 cup cold water.
1 cup sugar.

Put the fruit into a coarse strainer (or a potato ricer), rubbing it through into a large bowl. Pour the cold water through the strainer. Add the sugar, stir well and freeze according to general directions.

PINEAPPLE ICE

⅓ cup grated pineapple.
1 tablespoon lemon juice.
½ cup water.
2 tablespoons sugar.

Boil the water and sugar together about three minutes; add pineapple and lemon juice. Cool, strain and freeze according to general directions.

GRAPE FRAPPÉ

1 pint Welch's grape juice.
Juice 1 lemon.
1 pint water.
2 cups sugar.

Boil the water and sugar together for five minutes; cool and add the grape and lemon juice. Freeze to the consistency of a mush. Serve in tall glasses with sweetened whipped cream piled high on top.

CLAM FRAPPÉ

¼ cup cold Water
¼ cup Burnham's Clam Bouillon.
Speck paprika.

Blend and freeze according to General Rule, to the consistency of a soft Water Ice. Serve in small punch-glasses or champagne glasses, with a teaspoon of unsweetened whipped cream on top—Delicious to serve for dinner in place of shell-fish.

SCALPICON OF FRUIT

A delicious scalpicon is made by cutting all kinds of fresh fruits into small pieces flavoring with wine or lemon juice and sugar. Put into serving dish with Orange or Lemon Ice on top. Serve individually in champagne glasses on a small plate with doily, with a single rose or other flower to correspond with color of ice.

ORANGE STRAWS

Peel the orange or lemon lengthwise; cut into long, narrow strips, about one-fourth of an inch wide. Put into saucepan and cover with cold water and bring to the boiling point and pour off the water; repeat this process five or six times, or until the bitter taste of peel is extracted. Drain thoroughly and cover with granulated sugar. Cook until sugar is dissolved and is thick and hardens in cold water. Then roll straws in granulated sugar and cool. Serve with Orange Ice, etc., or as a bon-bon.

DIET IN DISEASE

DIET IN DISEASE

"One of the most striking differences between the olden and more recent modes of treatment in disease is the careful attention bestowed upon the diet at the present day. For it is now recognized that the proper selection of food, both solid and fluid, is of as much importance as the use of medicaments."

DIET IN FEVER IN GENERAL

In all fevers which are classed together as being apparently due to a poison multiplying itself in the blood, the art of diet consists in giving an almost continuous supply of liquid nutriment, holding very soluble aliment in a dilute form. There is nothing so digestible as water, and we take advantage of this high digestibility to get whatever it can dissolve digested along with it.

For the first three or four days, patients, previously strong, should have only *Fluid Foods*.

Fever closely resembles muscular effort in its arrest of the digestive functions. At the moment it makes an urgent demand for nutriment it should be supplied (as the tissues are beginning to suffer) by adding to the diet more substantial food, as chicken broth, meat jelly and strong broths.

DIET:—Milk is the staple food, but must be given with care, swallowed very slowly and diluted with lime water, soda, seltzer, or other effervescent water—one part to two parts milk.

If milk can be taken, two or three pints should be given—four ounces every two hours, or six ounces every three hours. In case milk does not agree, whey may be given as a substitute for milk in part or in whole. Modified milk or peptonised milk may be given.

Sometimes the milk may be flavored with tea, coffee, cocoa or malted milk and junket used.

Next to milk the most important article of diet is beef juice and broths. Then the well cooked gruels. Later well prepared foods, cereals and malt extract are valuable, and plain or cocoa junkets are given. Usually there is thirst, and all acid drinks such as grape juice and gelatin may be taken.

Panopepton with crushed ice, peptonised milk, clam, mutton and chicken broth, beef tea, clear soups, thickened with some farinaceous substance, are all of value.

Liquids:—Pure cold water, toast water, any of the acid drinks, all sipped slowly, are recommended both to relieve thirst and on account of its diluent effect and of its increasing the facility with which the waste matter resulting from rapid metabolism of the fever is eliminated through the kidneys.

AVOID:—Any solid or vegetable food or fruits, until permitted by the physician in charge.

DIET IN CONVALESCENCE FROM FEVER

Thompson*

Convalescents who have long subsisted solely upon fluids must be careful in resuming solid diet, for the rapidity of recuperation of the digestive organs varies in different persons, and taking meats or other solid foods too soon may cause rise in temperature, rapid heart action, and possibly visceral congestion. The first meat given, therefore, should be in a finely subdivided state, such as scraped beef or minced chicken.

During convalescence from protracted fevers the more easily digested forms of starchy foods are found to be very useful, especially if there has been much loss of weight. Sago and tapioca, and dried bread crumbs rolled through a fine sieve may be added to thicken clear meat broths. Crackers and zwieback are useful.

Other ingredients which may be added to thicken soups during convalescence are panada, semolina, tapioca, and macaroni. Custard puddings, cooked fruit, wine and beef jellies, blanc mange, or baked custard, may be allowed. "Mush," fine hominy, cornstarch, farina, and boiled rice, with beef juice, can be ordered.

* W. Gilman Thompson, M.D.: "Practical Dietetics." New York. D. Appleton & Co.

The following dietary will serve as a general guide for feeding convalescents from fevers of ordinary severity in which special lesions of the alimentary canal are not present. It is taken from a Handbook of Invalid Cooking.

FIRST DAY

Breakfast.—Poached egg on toast. Cocoa.
Lunch.—Milk punch.
Dinner.—Raw oysters. Cream crackers. Light wine if desired.
Lunch.—One cup of hot meat broth.
Supper.—Milk toast. Wine jelly. Tea.

SECOND DAY

Breakfast.—Soft cooked egg. Milk punch. Coffee with sugar and cream.
Lunch.—One cup of soft custard.
Dinner.—Cream of celery soup. Sippets of toast. A little barley pudding, with cream. Sherry wine if desired.
Lunch.—Milk punch.
Supper.—Water toast, buttered. Wine jelly. Tea.

THIRD DAY

Breakfast.—Coddled eggs. Cream toast. Cocoa.
Lunch.—One cup of hot chicken broth.
Dinner.—Chicken panada. Bread. Light wine if desired. A little tapioca cream.
Lunch.—An egg-nog.
Supper.—Buttered dry toast. Baked sweet apples and cream. Tea.

FOURTH DAY

Breakfast.—An orange. Oatmeal (H. O.), with cream and sugar. Poached egg on toast. Baked potato. Cocoa.
Lunch.—One cup of hot, soft custard.
Dinner.—Potato soup. Croûtons. A small piece of beefsteak. Creamed potatoes. Baked custard. Coffee.
Lunch.—One cup of chicken broth, with rice.
Supper.—Raw oysters. Banquet crackers. Graham bread, toasted Wine jelly. Tea.

FIFTH DAY

Breakfast.—An orange. Coffee. Oatmeal, with cream and sugar. Broiled mutton chop. Toast.
Lunch.—One cup of mulled wine.
Dinner.—Chicken soup. Bread. Creamed sweetbreads. Duchess potatoes. Snow pudding. Cocoa.
Lunch.—Siphon soda, with coffee syrup and cream.
Supper.—Buttered dry toast. Orange jelly. Sponge cake and cream. Tea.

A further discussion of this topic will be found in the section upon Convalescence in Typhoid Fever.

While brandy and whiskey constitute the best form in which to give alcohol in the acute stage of fever, in convalescence it is often advisable to use some other alcoholic drink, and an occasional change from one variety to another renders the patient somewhat less liable to the danger of acquiring a permanent alcoholic habit. For convalescence, if the patient's purse can afford it, champagne, port wine, sherry, Madeira, or a good claret or Burgundy, may be taken with advantage, in the class of cases above mentioned.

DIET IN TYPHOID FEVER

Shattuck *

When typhoid fever kills it does so either by perforation or exhaustion, the proportion of the former being estimated at 5 to 10 per cent. The main factors in producing the exhaustion which causes the death of at least nine-tenths of the fatal cases are toxemia, continued fever, diarrhea and vomiting, and intestinal hemorrhage. The heart is ordinarily the best index of the presence and degree of exhaustion, and the most frequent serious pulmonary complication, hypostasis, in its various forms, degrees and consequences, is the direct outgrowth of the cardiac weakness. Moreover, typhoid fever is not short and sharp like pneumonia, but of long course, and usually attended with decided, often with very great wasting of the muscular and fatty tissues.

Most of us are agreed that we are not as yet acquainted with any therapeutic measures which will either abort or very materially shorten the course of the disease. We are, I think, unanimous in believing that husbanding the strength from the start through skillful nursing, the judicious use of water externally

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* Frederick C. Shattuck, M.D.—Read by title in the Section on Practice of Medicine at the Forty-eighth Annual Meeting of the American Medical Association at Philadelphia, Pa., June 1–4, 1897.

and internally, and the supervision of a wise attendant on the watch for and prepared to meet such indications as may arise, materially modifies the course of the disease and lessens its mortality. If what I have assumed to be facts be really facts, the question of diet must be a very important one in the management of typhoid fever. It is through the food which is assimilated, not through that which is merely put into the stomach, that we seek to limit the tissue waste while the process is active, and also try to land the patient on the low shore of convalescence with as much of his property as may be; for the recovery of his property is a necessary preliminary to the attainment of the high tableland of full health.

Under the old doctrines as to inflammation, fever was an unfailing indication for depletion; directly by venesection, pukes, sweats and purges; indirectly by starvation. Indiscriminate direct depletion is now a thing of the past, and since the time of Todd the fact has gradually been more and more clearly recognized that the febrile state is often an indication for more, rather than less, nourishment, with selection as to quality, rather than diminution as to quantity. In the shorter essential fevers a few days' starvation can not do much harm, and may even be of great service with a certain class of patients. But suppurative fever for instance, whether of tubercular or other origin, especially if chronic, we feed to the largest limit; and we do this because we treat the condition and not the disease, individualizing our cases. Since our knowledge of gastric chemistry has been enriched by the adaptation of the soft catheter to another hollow viscus at the opposite extremity of the abdomen, a more complete explanation has been afforded for the fact which we knew by practical experience before, that gastric digestion is often weakened in the febrile state. But the same practical experience teaches us that it is not always so, or very materially so, and when theory and practice conflict, the former must prevail. Have we not fully escaped from the domination of the old doctrine as to the lowering treatment of inflammation, or are there valid reasons why we should be less bold in feeding our typhoid patients than our chronic febrile consumptives? Three such reasons deserve special consideration. In the first place, typhoid is far more frequently a self-limited disease than is phthisis; but the fact of a self-limitation does not seem to me to warrant us in underfeeding, for the less the patient loses the less does he require to regain. In the second place, typhoid has constant intestinal lesions which may bleed or perforate, and which may be accompanied by a general catarrhal state of the intestinal tract. I may perhaps add here that diarrhea is not nearly as constant a symptom in typhoid fever as the books lead students to believe. In at least 50 per cent. of my hospital cases no diarrhea was present at any time. We must therefore have reference to the local intestinal lesions as well as to the general state. In a disease of such long course it is impossible to prevent accidents by putting the bowels in splints, even if it were desirable to do so. More or less peristalsis must go on, and waste matter must pass over the ulcerated surfaces; and how deep or extensive the ulcerated surface may be in any particular case no symptom or group of symptoms enable us to measure. Hence, it seems rational, quite apart from the fever, to withhold from the diet any articles the residue of which is liable to irritate either the mucous membrane in general or the ulcerated portion in particular. This would seem a fair explanation for the popularity of milk as a diet for typhoid, containing as it does a large proportion of water, and every principle necessary to nutrition, so combined as to make relatively small demands on the digestion of most persons, and leaving a residue which, though notoriously large, is not mechanically irritating. The objection to milk is that it is repugnant to a few persons, and becomes either repugnant or monotonous to a considerable number sooner or later. It is not necessary here to specify the many expedients which may and often must be resorted to to overcome this objection, and in some cases to render it digestible whether palatable or not. Milk is likely to maintain a very important, perhaps leading place in the diet of typhoid, as well as of other diseases and conditions. For a number of years I adhered as strictly as possible to an exclusively milk diet in typhoid fever until at least a week had elapsed from the date of the first normal evening temperature. I closed my ears to the clamors of adults, and my eyes and heart to the tears of children, as I now believe, unnecessarily. Thirdly, it was only comparatively recently the general opinion of the profession that relapse is or may be due to errors in diet. I well remember the time when a fresh access of fever led my teachers and me to carefully inquire into the kindness of officious friends. It was often proved that forbidden fruit actually or metaphorically had been brought in by a visitor, and this was an entirely satisfactory explanation. When proof could not be had, the fact of relapse was strong presumptive evidence of sin. We know better now, and while we recognize that errors in diet may produce fever, as may fatigue or excitement in convalescence from any severe disease, we do not believe that they can start up a fresh invasion of bacilli from within. One of the things which set me thinking on this question of the diet in typhoid was the favorable course run by several acute febrile cases for whom I ordered a full diet because they were weak; believing at the time of so doing that typhoid could be excluded, but being forced to the conclusion later that only typhoid fever could explain the whole course of the disease. These patients did perfectly well, were happier and convalesced more rapidly than my recognized typhoid cases fed exclusively on milk. For five years now, I have been enlarging the diet of my typhoid cases, and have seen no reason to regret this course, but, on the contrary, found cause for satisfaction.

During the twelve years, 1886 to 1897 (both inclusive), 380 cases of typhoid fever have come under my personal care in the Massachusetts General Hospital. From 1886 to 1893, 233 cases were treated under a milk diet, with a mortality of 10 per cent. From 1892 to 1897, 147 cases have been treated under a much more extended diet with a mortality of 8.1 per cent. I know well the liability to reach false conclusions in reasoning from too small figures in a disease like typhoid fever. And it is also true that water has been used more efficiently of late than in former years. But I can see nothing in my figures to contravene my observation that an enlarged diet has not been injurious. I would not be understood as advocating an indiscriminate diet. My plea is simply for treating the patient rather than the disease; for feeding him with reference to his digestive power rather than solely or mainly with reference to his fever; for the view that the danger of accidents from the local intestinal ulceration is not increased by allowing him to partake of articles which leave no irritating residue, and which cautious trial shows are digested without disturbance or discomfort. At one end of the scale are the cases with such irritability or weakness of the stomach as to lead to the unfortunate term gastric fever, or those with pronounced diarrhea and undigested food in the stools; at the other end are those more numerous cases with clean tongue and a desire for food. Between the two is every gradation. The life of the former may depend on the skill and ingenuity of the doctor, assisted by the intelligent devotion of the nurse. The comfort and the duration of disability of all others may be materially modified for good by careful study and wise individualization of our cases. A long list of permissible articles, from which selection can be made for different cases, and for the same case at different times under varying circumstances, can be given. That which I append makes no claim to completeness, but is meant merely to be suggestive and illustrative:

Typhoid Diet

1. Milk hot or cold, with or without salt, diluted with lime water, soda water, apollinaris, vichy; peptogenic and peptonised milk; cream and water (*i.e.*, less albumin), milk with white of egg, slip buttermilk, kumyss, matzoon, milk whey, milk with tea, coffee, cocoa.
2. Soups: beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash; carefully strained and thickened with rice (powdered), arrowroot, flour, milk or cream, egg, barley.
3. Horlick's food, Mellins' food, malted milk, carnipeptone, bovinine, somatose.
4. Beef juice.
5. Gruels: strained cornmeal, crackers, flour, barley-water, toast-water, albumin, water with lemon-juice.
6. Ice-cream. Water ice.
7. Eggs, soft boiled or raw, egg-nog.
8. Finely minced lean meat, scraped beef. The soft part of raw oysters. Soft crackers with milk or broth. Soft puddings without raisins. Soft toast without crust. Blanc mange, wine jelly, apple sauce and macaroni.

DIET IN TYPHOID FEVER

The regulation of the diet in typhoid fever forms a very important part of the treatment. There is great danger in overfeeding in typhoid. In the ordinary case, two and a half pints of milk and a pint and a half of beef, mutton or chicken broth will be a fair average supply, given in divided quantities, alternately. Give ten ounces at a time, every three hours; the broths will come in after every second supply of milk. The amount of meat broths must be governed by the state of the bowels. If diarrhea, then broths must not be given, or should be given in very small quantities.

Broths tend to increase diarrhea. In some cases meat jelly iced or extract of meat may be taken in place of broths, a teaspoon being given at a time.

The chief guide in the matter of food in typhoid must be found in the condition of the stools. The physician in charge of the case should himself see the motions daily. If any signs of undigested food appear, there is something regarding the dietary that is wrong. If masses of hard curd appear in the motion, there is probably too much milk given in the twenty-four hours, or it is being given in too large quantities at a time.

It may be that the quantities are not wrong, and that dilution of the milk, or the addition of an alkali, or of some farinaceous material in powder well cooked in milk will answer the purpose by preventing the formation of the firm curd.

Milk, if not retained or digested, should be peptonised.

The chill may be taken from milk by adding a little hot water, and twenty drops of the saccharated solution of lime in each supply will secure alkalinity. Farinaceous substances to use in milk are arrowroot and baked flour, to aid in subdivision of the curd. Food should not be given as the nurse sees fit, but definite directions should be laid down as to the quantity to be given at a time and the mode of its administration.

Indication for the use of alcohol lies in the condition of the heart. A small, frequent, easily compressed pulse, especially if associated with feebleness of the first sound of the heart, is a clear indication that alcohol is required. The amount given should be small—from a teaspoon to a tablespoon, or one ounce of wine.

Alcohol, on account of effect only lasting for a short time, should be given every two hours, so that stimulation is kept up. In giving alcohol, you get an effect first of stimulation, then depression.

The use of alcohol is not advocated by some physicians.

DIET IN CONVALESCENCE FROM TYPHOID

Thompson*

As the fever subsides, it becomes an important question how soon to allow a return to solid food. Relapses are very easily induced by indiscretion in this regard.

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* W. Gilman Thompson, M.D.: "Practical Dietetics." New York. D. Appleton & Co.

The patient's appetite is always a dangerous guide to follow in this disease. After four or five weeks of an exclusive milk or milk and broth diet, when the temperature subsides, and often before it has become normal, he becomes ravenous. Like a long-starved man, he thinks of nothing but food, and demands something new to eat every day. A hospital ward containing a dozen convalescing typhoid-fever patients, is difficult to manage, as a bread riot is constantly menaced. Ill-advised but sympathetic friends attempt to smuggle in all manner of forbidden fruits, and the patient just arrived at the hungry state is tempted to steal solid food from his more advanced neighbors.

In the milder cases it is undoubtedly both safe and wise to allow a strengthening diet at an early date, and it will greatly prolong convalescence to forbid it. Light farinaceous diet—tapioca, rice, vermicelli, cream-toast, a cracker soaked in cream, etc.—may be given with impunity in cases which have run a mild course, as soon as the temperature remains normal. Meat broth may be thickened with rice, sago, or vermicelli. In a day or two more, the soft part of oysters or a chop are permissible in cases which have presented no need of prolonging a fluid diet for fear of intestinal injury.

The following is a list of fluids suitable for the different days of convalescence, commencing a day or two after disappearance of all fever. Milk should still be given, until gradually wholly replaced by solid food:

First Day.—Chicken broth thickened with thoroughly boiled rice. Milk toast or cream toast once only during the day. Beef juice.

Second Day.—Junket, mutton broth, and bread crumbs. Cocoa. Milk toast. A piece of tender steak may be chewed but not swallowed. One of the prepared farinaceous foods, such as Mellins' or Horlicks' may be given with a cup of hot milk.

Third Day.—A small scraped beef sandwich at noon. A soft cooked egg or baked custard for supper. Boiled rice or potato purée strained. Arrowroot gruel.

Fourth Day.—The soft part of three or four oysters. Meat broth thickened with a beaten egg. Cream toast. Rice pudding or blanc mange and whipped cream, or Bavarian cream.

Fifth Day.—Scraped beef sandwich. A tender sweetbread. Bread and milk. A poached egg. Wine jelly or calf's foot jelly. Macaroni.

Sixth Day.—Mush or crackers and milk, scrambled eggs, chicken jelly. Bread and butter. The soft parts of raw oysters.

Seventh Day.—A small piece of tenderloin steak or a little breast of broiled chicken. Bread and butter. Boiled rice. Wine jelly. Sponge cake and whipped cream.

Eighth Day.—A slice of tender rare roast beef, a thoroughly baked mealy potato served with butter or mashed with cream. Other food as before.

Ninth Day.—A little broiled fresh fish for breakfast. Beef steak at dinner. Rice, macaroni, eggs. Sago, rice, or milk pudding. A baked apple.

Tenth Day.—Mush and milk. A squab or breast of partridge or roast chicken. Other foods as before. Ice cream.

For the next four or five days the patient may select articles from the *menu* of the previous day, so that three good meals a day are taken, besides three or four glasses of milk between meals.

It is often desirable to give a little alcoholic stimulant, especially if there is much difference in the frequency of the pulse between lying and setting or standing, or if the pulse rate is very low, say 56, as it sometimes is. A glass of sherry or a good, sound Burgundy, or a tumbler of ale may be drunk, but with meals only.

SCARLET FEVER

Davis *

Dietetic Treatment. Vomiting is the rule at the outset of the malady, but is rarely troublesome afterward. During the few days of fever, cold drinks—water—acid drinks—seltzer, etc.—should be given freely. The food must be liquid.

Milk is the best. It can be varied by gruels, oranges, stewed or baked apples, and stewed prunes. But while the fever ranges high it is best to use only milk or gruels. These ought to be given every hour, in doses of from three to five ounces. When the throat is intensely sore, swallowing may become so distressing as to cause children to refuse food. Then rectal alimentations must be resorted to. Care should especially be taken that enough fluid is administered by rectum or hypodermically to maintain good elimination by the kidneys. Ice-cream can often be swallowed with comfort when fluids give pain.

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* N. S. Davis, "Dietotherapy, Food in Health and Disease." Philadelphia, Blakiston.

Such a diet should be prescribed as will avert nephritis. The latter occurs more frequently in scarlet fever than in any other eruptive disease. It usually shows itself in the second or third week of the malady.

Since nephritis appears almost as often after mild scarlatina as after severe cases, great care in regard to diet must be taken in all cases during the first three weeks of the illness.

Milk is the best food during the time. Koumyss, Matzoon, and gruels may be employed for variety if a strict milk diet cannot be maintained. When convalescence is established, there may be added to milk diet, oatmeal, soft boiled rice, puddings of cornstarch, farina and sago, with cream, milk toast, baked potatoes, stale bread with butter or fruit jellies, baked apples, stewed apples, stewed prunes and oranges. After the third week, fish, such as creamed codfish, oysters, oyster or clam broth, squabs and breasts of chickens, and later the red meats, may successively be tried. A greater variety of simply cooked vegetables may also be used. Adults may have tea, coffee, and cocoa.

During the first days of convalescence, care must be taken that too much food and food of two varied a character be not taken. Children become extremely hungry, but their desire for quantity and variety cannot safely be satisfied.

When, in spite of such care, inflammation of the kidneys develops, the regimen must be that of nephritis rather than of scarlet fever.

NEPHRITIC DIET

Massachusetts General Hospital *

Nephritic Diet:—Bread, soft puddings, without eggs; all vegetables, exept peas and beans. Fruits of all kinds. Gruels and broths.

Avoid.—Meats; eggs; peas; beans.

MEASLES

Davis †

Dietetic Treatment. The diet of measles is that of acute febrile maladies in general. During the period of pyrexia (fever), appetite and digestion are poor. Food at this time should consist of milk, milk preparations, broths, and gruels.

Cool drinks—water, acid drinks, and vichy, seltzer, either plain or with fruit juice—should be given freely.

Nephritis is as rare a complication of measles as it is common in scarlet fever.

In some epidemics, enteritis, with diarrhœa, is common. Care must be taken not to give solid food too soon or to vary the food too early.

During convalescence, or at the beginning, there is danger of an extension of the bronchial inflammation to the small tubes, and broncho-pneumonia, the dangerous prostration develops, and feeding is difficult. Digestion is slow and imperfect, but food is necessary to combat the growing weakness. Liquid food must be given often and in moderate portions. For adults, coffee is often useful as a cardiac stimulant.

During the febrile period of illness, *hand-fed* infants should be given food oftener and in a more dilute form than usual, so that the stomach shall not be taxed while its functions are imperfectly maintained.

When convalescence begins in older children, a more varied diet may at once be prescribed. Solid food, and especially nitrogenous foods, need not be withheld.

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* Diet used at the Massachusetts General Hospital, Boston.

† N. S Davis, "Dietotherapy, Food in Health and Disease." Philadelphia, Blakiston,

Exceptions to this rule should be made in case of hemorrhagic measles.

TONSILITIS AND QUINSY

Thompson*

Dietetic Treatment. These diseases require no special care in the acute stage, beyond giving food in such fluid form as can be most easily swallowed. The pain caused by this act is often so extreme that it is advisable to concentrate all food, to lessen the number of necessary acts of deglutition. Meat juice, peptonoids, beaten eggs and brandy, may be added to good milk. Plain vanilla ice cream may be given. Its coldness is sometimes soothing to the pharynx.

Holding cracked ice in the mouth before swallowing will sometimes annul the pain momentarily, or in extreme cases the pharynx and tonsils may be sprayed with cocaine, and the period of temporary anæthesia may be utilized for swallowing considerable nourishment. This is rarely necessary, for unless the patient is emaciated by previous serious illness, he is not apt to be in need of much food for a day or two. In bad cases of suppurative tonsilitis the strength suffers more, and stimulants may be given by the rectum if deglutition is impossible.

After all forms of tonsilitis there is apt to be considerable anæmia, and the patient for a week or two should eat abundantly of animal food. Egg-nog and milk punches are often needed for the first few days of convalescence.

DIPHTHERIA

Thompson*

Dietetic Treatment. "Alimentation occupies the first place in the general treatment" (Trousseau). Throughout the active stage of the disease, while the fever lasts, there is difficulty in swallowing. All food must be given in fluid form, of which milk is the best, or if, as sometimes happens, semi-solid material is more easily swallowed, the food must be thickened with cream, gelatin, eggs, or farinaceous articles; or beef meal, Mellins' food, malted milk, etc., may be added for this purpose to other foods.

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*W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

The diet should consist chiefly of nutritious beef or chicken broth and beef tea, egg albumin, egg-nog, milk, and milk punch. Plain vanilla ice cream is nutritious, and if not too sweet, it is well borne, and is frequently very grateful to the inflamed throat. Simple farinaceous foods, such as arrowroot, thoroughly cooked rice, soft cream toast, and gruels, may be taken. Continued disgust for food is a very bad prognostic sign, and every effort must be made to counteract it by offering variety. When the child is unable to swallow on account of pain in accumulation of membrane in the throat, forced feeding with a nasal or stomach tube may be better than nutrient enemata.

PNEUMONIA

Thompson *

Dietetic Treatment. The indications for treatment are to give a light diet, which will not excite the cough in swallowing, or increase dyspnœa by distention of the stomach, or augment the enfeeblement of the heart action by overtaxing the digestive powers. Vomiting should be especially guarded against, and if nausea exists, efforts should be made at once to control it. It is not necessary to keep the patient upon a rigid milk diet, but if milk is well borne, it is advisable to give nothing else while the acute symptoms last; otherwise, whey, meat juice, broths, and egg albumin may be allowed. Starchy and saccharine food must be withheld. Cold drinks are both acceptable and beneficial to the patient, and water plain or aërated, such as Apol-

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* W. Gilman Thompson, M.D.; "Practical Dietetics," New York. D. Appleton & Co.

linaris or soda water, may be drunk in considerable quantity. It is believed by some authorities that the activity of the kidneys may be thus promoted, and that the poison which occasions the constitutional symptoms of the disease may be better eliminated. There are cases, however, among persons with robust circulation, in which the onset is very sudden and violent. The pulse is full and bounding, and the heart is greatly overworked by the effort to propel a large volume of imperfectly aërated blood. In such instances the addition of large quantities of fluid to the circulation, besides what is actually required for nutrition, may have the effect of still further straining the heart.

It is stated that carbonated waters reduce the viscidity of the sputum, which is often very tenacious.

The diet should be kept fluid until defervescence has occurred, with a normal temperature and commencing disappearance of the exudation—in fact, it is well to prolong the fluid diet for three or four days after the temperature has become normal, in order to make sure that a relapse of the fever is not likely to follow. In those cases in which resolution is postponed, and the patient becomes more and more feeble, although the temperature may be nearly or quite normal, it may be desirable to give a little properly prepared solid food somewhat earlier, and scraped beef, with toast, or a soft cooked egg may be added to the milk diet.

During the entire period of convalescence the diet must be very nourishing and of easy digestion; milk may still be given, and after slowly returning to the regulation three meals a day (see Diet in Convalescence from Typhoid Fever, p. 212), patients do well to take milk punch, or egg-nog, or a glass of wine and a biscuit three or four times a day in the intervals.

Alcohol is exceptionally well borne, and it undoubtedly serves both as a food and a support to the overworked heart. The fact that it is thoroughly oxidised in the circulation or tissues is demonstrated by the large quantities which patients can often digest and absorb without toxic symptoms. Doses may be thus tolerated which in health would ordinarily produce drunkenness. In alcoholic subjects who have been drinking up to the time of the onset of the disease, it is indispensable to continue the use of alcohol, for the sudden withdrawal of its stimulating effect on the organism may give rise to rapid collapse. In aged and constitutionally weak persons it is also important that its use should be begun early in considerable quantities.

In extreme cases as much as an ounce every two hours, or twelve ounces in the day, may be given with benefit, but ordinarily from six to eight ounces will suffice. There are other cases found among robust subjects who do not need such stimulating, and possibly may not require alcohol at all. The custom now in vogue of prescribing other forms of cardiac stimulants, such as strychnine and vasodilators, like nitroglycerin, makes the employment of excessive doses of alcohol less imperative. It should always be remembered that it is undesirable to produce toxic symptoms of alcoholism in pneumonia, as well as in any other disease. So long as the pulse is slowed and its force strengthened, the use of alcohol may be regarded as beneficial; but if delirium is increased, and the odor of whiskey or brandy is strong in the breath an hour or two after it has been given, it is an indication that the patient is receiving more than is desirable, and the dosage should be reduced. From its serving as a fuel, and thereby saving tissue waste in the muscles, the free use of alcohol in pneumonia undoubtedly saves many lives.

BRONCHO-PNEUMONIA

Thompson *

Dietetic Treatment. Broncho-pneumonia is always a very critical disease, and the utmost care is required in nursing and feeding. The diet should consist of such articles as meat juice, predigested milk, and egg albumin. Stimulation is early required, and in considerable quantity. Brandy or whiskey, sweetened with a little sugar, and cold water, should be systematically given, especially to young children, who are unable to make their want of drink known. Hot milk and Vichy, in the proportion of one part of Vichy to two of milk for older children, or half-and-half for young infants, may have the effect of loosening the tenacious mucous and easing the cough. If there is any tendency to flatulency, aërated waters had better be avoided. When the disease occurs in children the diet should be adapted to foster the strength and tax the digestive organs as little as possible. At first food should be given every two hours, and milk is usually all that is required. Later it may be alternated with or supplemented by egg albumin, expressed meat juice, plain beef or mutton broths, arrowroot, or other gruels.

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

MUMPS

Thompson *

For mumps no special diet is required, beyond the necessity of giving fluids or soft food while the swelling of the parotid glands and fever last. The suggestions for the dietetic treatment of tonsillitis apply to this disease. Anæmia is apt to be extreme during convalescence, and meat should therefore be plentifully supplied. Cod-liver oil is very appropriate in protracted convalescence.

WHOOPING COUGH

Thompson *

In whooping cough the paroxysms of coughing are so severe as to give rise to vomiting, and in bad cases

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

they are excited by taking food which does not have an opportunity to become assimilated, and nutrition may suffer very seriously in consequence, adding to the general exhaustion which accompanies the disease. All food must be made easily assimilable. It is best to give food regularly in moderate quantity at each time, and it should be predigested if necessary. Pancreatinised milk, kumyss, the prepared amylaceous foods, cream toast, eggs, junket, chicken broth, malted farinaceous foods, custard, milk puddings, gruels thickened with meat extracts, and stimulants in the form of egg albumin in sherry, egg-nog or milk punch, are recommended for patients who vomit solid food. The worst cases require nutrient enemata, as exhaustion becomes critical.

DIABETES

The dietetic treatment of diabetes is one of intelligent watchfulness.

Cases differ so much from one another that no hard and fast rule applicable to all can be laid down. What is harmful to one patient is well borne by another; and whereas a rigid regimen can be followed by one person, its maintenance leads to adverse complications in another. The successful treatment of a diabetic patient lies (in fact) between his cook and his doctor; in the careful and intelligent preparation of his food on the one hand by the cook, and on the other, in the checking and control of his diet by the physician, according to the physical signs given by examination of the patient and his urine.

Massachusetts General Hospital *

DIET.—Meats of all kinds (except liver), fish except lobsters or oysters, poultry, game, eggs, cheese, butter, lettuce, celery, cucumbers, watercress, dandelions, young onions, cabbage, cauliflower, spinach, beet-tops, string beans, artichokes, filberts, mushrooms, almonds, butternuts, walnuts, cocoanut, sour oranges, grape fruits, currants, alkaline waters.

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* Diet used at the Massachusetts General Hospital, Boston.

AVOID.—Sugar, syrup of all kinds, potatoes, beets, peas, parsnips, carrots, beans, arrowroot, sago, tapioca, oatmeal, barley, sweet fruits, chocolate, cider, malt liquors, champagne, sparkling or sweet wines and milk.

DIABETES (CHRONIC)

DIET.—*Soups.* Soups or broth of beef, chicken, mutton, veal, oysters, clams, terrapin or turtle (not thickened with any farinaceous substances), beef tea.

Fish.—Shell fish and all kinds of fish, fresh, salted, dried, pickled or otherwise preserved (no dressing containing flour).

Eggs.—In any way most acceptable.

Meats.—Fat beef, mutton, ham or bacon, poultry, sweetbreads, calf's head, sausage, kidneys, pig's feet, tongue, tripe, game (all cooked free of flour, potatoes, bread or crackers).

Farinaceous.—Gluten porridge, gluten bread, gluten gems, gluten biscuits, gluten wafers, gluten griddle cakes, almond bread or cakes, bran bread or cakes.

Vegetables.—String beans, spinach, beet-tops, chicory, kale, lettuce, plain or dressed with oil and vinegar, cucumbers, onions, tomatoes, mushrooms, asparagus, oyster plant, celery, dandelions, cresses, radishes, pickles, olives.

Desserts.—Custards, jellies, creams (without any sugar), walnuts, almonds, filberts, Brazil nuts, cocoanuts, pecans.

Drinks.—Tea or coffee (without any sugar), pure water, peptonised milk, butter milk.

AVOID.—Liver, sugars, sweets or starches of any kind, wheaton bread or biscuits, corn bread, oatmeal, barley, rice, rye bread, arrowroot, sago, macaroni, tapioca, vermicelli, potatoes, parsnips, beets, turnips, peas, carrots, melons, fruits, puddings, pastry, pies, ices, honey, jams, sweet or sparkling wines, cordials, cider, porter, lager, chestnuts, peanuts.

SUBSTITUTES FOR STARCH AND SUGAR

Gum Gluten can be made into bread and a great variety of dishes, and is the most satisfactory substitute for the wheat flour bread, or bread in common use, and the effects are particularly noticeable in the reduction of sugar in the daily tests.

Sweetina is in the pure crystal form, and is made into a syrup by adding cold water. Distilled water is preferable. It is sold in small bottles at 25 cents each, the contents of which is equal to eight pound of sugar in sweetenting power.

One bottle of crystals makes one pint of syrup, of which a teaspoonful is equal to a cupful of sugar.

Sweetina is an improved product from coal tar, and is considered better than tablets, as there is no foreign substance added to dilute or bulk it, and to be unnecessarily taken into the system.

It may be procured from grocers selling Gum Gluten.

MENUS FOR THE DIABETIC

WINTER

SUNDAY

BREAKFAST

Gluten Porridge, Steak, Scrambled Eggs,
Gluten Toast, Coffee.

DINNER

Oysters, Celery Soup, Gluten Crackers,
Roast Beef, Boiled Onions, Spinach,
Shrimp and Lettuce Salad,
Olives, Salted Almonds, Coffee,
Baked Custard.

SUPPER

Gluten Crisp in Milk.

MONDAY

BREAKFAST

Gluten Breakfast Food,
Sausage, Parsley Omelet, Coffee,
Gluten Muffins.

LUNCHEON

Oyster Stew, Gluten Crackers,
Celery Tea.

DINNER

Bouillon, Creamed Salmon, Olives,
French Chops, String Beans,
Celery, Fried, Nuts, Coffee.

TUESDAY

BREAKFAST

Gluten Griddle Cakes,
Codfish Croquettes, Creamed Celery,
Gluten Bread, Coffee.

LUNCHEON

Creamed Dried Beef,
Cream Cheese, with Lettuce,
Gluten Toast, Tea.

Dinner

Cream of Onion Soup,
Roast Pork, Fried Sour Apples,
Celery, Pickles, Cabbage Salad,
Gluten Cheese Wafers, Coffee Jelly.

WEDNESDAY

Breakfast

Gluten French Toast,
Boiled Eggs, Bacon, Baked Apples, Coffee.

Luncheon

Chicken Salad, Gluten Bread and Butter,
Olives, Tea.

Dinner

Tomato Soup,
Broiled Beefsteak, Mushroom Sauce,
Onions, Spinach
Cheese Souffle, Coffee.

THURSDAY

Breakfast

Gluten Porridge, Kidney Stew,
Cresses, Gluten Muffins.

Luncheon

Scalloped Oysters, Nut Sandwiches,
Cold Slaw, Tea.

Dinner

Little Neck Clams,
Boiled Mutton, Caper Sauce, Oyster Plant,
Pickles, Lettuce, Onions, French Dressing
Gluten Cheese-Crackers, Coffee.

FRIDAY

Breakfast

Gluten Breakfast Food, Fried,
Mackerel, Egg Sauce, Gluten Drop Biscuit.

Luncheon

Aspic Jelly, with Tongue,
Lettuce Sandwiches, with Gluten Bread,
Tea, Cream.

DINNER

Fried Oysters, Celery, Baked Fish,
Creamed Cabbage, Canned Asparagus,
Tomato Jelly, Mayonnaise,
Gluten Nut Sandwiches,
Club Cheese, Coffee.

SATURDAY

BREAKFAST

Gluten Griddle Cakes, Ham and Eggs,
Fried Sour Apples, Coffee.

LUNCHEON

Clam Soup, Gluten Baking Powder Biscuit,
Baked Macaroni and Cheese, Tea.

DINNER

Fish Croquettes, Tomato Sauce,
Boiled Chicken, Chestnut Dressing.
Baked Onions, Tomatoes, Dressed Celery,
Cheese, Coffee.

SUMMER

SUNDAY

BREAKFAST

Gluten Breakfast Food,
French Chops, Sliced Tomatoes, Cresses,
Gluten Muffins, Coffee.

DINNER

Asparagus Soup, Broiled Chicken, Cresses,
Green Onions, Creamed, on Gluten Toast,
Beet-Tops, Lettuce, French Dressing,
Gluten Cheese-Crackers,
Whipped Cream, with Chopped Nuts,
flavored with Sweetina and Vanilla
Coffee.

SUPPER

Tomato Mayonnaise,
Gluten Nut Sandwiches,
Iced Tea, with Sweetina.

MONDAY

BREAKFAST

Gluten Porridge,
Minced Chicken on Gluten Toast,
Omelet, with Asparagus Tips,
Gluten Bread, Coffee.

LUNCHEON

Creamed Sweetbreads,
Gluten Bread and Butter, Tea, Cream.

DINNER

Bouillon, Veal Cutlet,
String Beans, Cucumbers,
Egg Salad, with Cresses, French Dressing,
Coffee Jelly, Whipped Cream.

TUESDAY

BREAKFAST

Gluten Pancakes, Fried Perch,
Gluten Toast, Boiled Eggs, Radishes, Coffee.

LUNCHEON

Veal Croquettes, Cucumbers, Lettuce,
Gluten Drop Biscuit, Tea.

DINNER

Veal Broth, with Lemon and Parsley,
Roast Lamb, Spinach, Tomatoes,
Asparagus, French Dressing,
Cheese Souffle, Coffee.

WEDNESDAY

BREAKFAST

Gluten Breakfast Food, Summer Sausage,
Frozen Tomatoes, Scrambled Eggs,
Gluten Bread, Coffee.

LUNCHEON

Omelet, with Ham, Lettuce and Onions,
Gluten Bread, Tea.

DINNER

Fried Fish, Cresses, Cold Lamb,
Baked Onions, Asparagus,
Cabbage Salad, Gluten Crackers,
Grated Cocoanut, Coffee.

THURSDAY

BREAKFAST

Gluten Griddle Cakes,
Sweetbreads, breaded with gluten crumbs
and Fried.
Radishes, Gluten Biscuit, Coffee.

Luncheon

Broiled Mushrooms,
Olives, *Gluten Bread,* *Tea.*

Dinner

Cream of Tomato Soup,
Escalloped Fish, *Olives,* *Gluten Bread,*
Cold Tongue, *String Beans,*
Tomatoes, *Gluten Macaroni,* *Iced Coffee.*

FRIDAY

Breakfast

Gluten Porridge, *Creamed Codfish,*
Scrambled Eggs, *Gluten Drop Biscuit,*
Coffee.

Luncheon

Swiss Pudding, *Ham Sandwiches,*
Gluten Bread, *Cocoanut,* *Tea.*

Dinner

Cream of Spinach Soup, *Broiled Shad,*
Tomatoes, *Cucumbers,*
Sliced Onions, *Asparagus Salad,*
Gluten Nut Sandwiches,
Cream Cheese, *Gluten Wafers,* *Coffee.*

SATURDAY

Breakfast

Gluten Breakfast Food, Fried,
Broiled Ham, *Tomato Omelet,*
Gluten Muffins, *Coffee.*

Luncheon

Tongue, *Shad Roe,*
Gluten Bread and Butter, *Iced Tea.*

Dinner

Lamb Broth, *Boiled Squab,*
Tomatoes, *Cresses,*
Lettuce, Aspic, with Mayonnaise, *Cheese,*
Custard, with Nuts, *Iced Coffee.*

EXCESS OF URIC ACID

An excess of this poison is very often (not always) the cause of many diseases—such as chronic cases of bronchitis and asthma, hay fever, severe nervous depression, and sometimes insanity. The kidneys become irritated and diseased; also gout and rheumatism, tonsillitis, grippe, influenza, colds; these are only a few that may be traced to the same origin.

Treatment for Uric Acid.—Exercise in the open air —walk—plenty of fresh air by night as well as by day. Breathe deeply. Bathe often; rub the body thoroughly afterward; the skin should play an important part in elimination of uric acid.

To prevent the formation of an over supply of uric acid, be careful of diet. The first thing, do not eat meat. You may eat nuts with salt, fresh ripe fruit; best of all, apples unpeeled; all cooked fruits, but very little sugar in them; all vegetables that grow above ground (not those that grow below ground); greens are especially good, with good cider vinegar. Bread may be eaten in moderation, graham and entire wheat best, good water crackers, cereals of all kinds; eggs should be used sparingly, and in severe cases not at all. Fish is good, also shell-fish. No pastry or sweet cakes; milk and cheese may be used freely, also buttermilk. Drink no coffee, tea, malt or alcoholic liquors. Drink pure water and a great deal of it; sometimes it is well to use lithia tablets.

ACUTE GOUT

Dietetic Treatment. During acute attacks the diet must be restricted, but the extent of restriction will depend upon age, habits and conditions of the patient.

Meat and alcohol as a rule are excluded. As a rule it is best to exclude meat, more especially red meat, and, unless especially necessary, forbid alcohol. In old people, with feeble circulation, accustomed to the regular and free use of alcohol, it may be necessary to allow a small amount. If the kidneys be seriously at fault it may be best not even to give small amount of alcohol.

For the young and strong the diet should consist mainly of farinaceous substances and broths, made not too strong, such as bread and milk, a cup of weak tea with milk, dry toast with a little butter, vegetable broths, two ounces of milk with Vichy water; rice, sago, semolina or an farinaceous puddings made without eggs.

He should sip half a pint of hot water twice or thrice daily between meals, and barley water and toast water may be allowed. After acute symptoms have subsided, boiled fish and a little chicken may be given once a day, and nourishment carefully and gradually increased.

For old or feeble persons the diet, although kept in same lines, must be more supporting; have broths, etc., stronger, and beef juice, chicken broth and an egg beaten up in a glass of milk once a day.. Alcohol may also be necessary.

In protracted cases it may be necessary to allow more nutritious diet, including fish, soup and white meats, as well as an allowance of brandy or whiskey.

CHRONIC GOUT

DIET: *Soups.*—Clear vegetable broths, fresh fish soup.

Fish.—Fresh fish broiled or boiled, raw oysters.

Meats.—Eat of all kinds sparingly, game, chicken, fat bacon.

Farinaceous.—Crackers, dry toast, milk toast, macaroni, graham bread or rolls, rye bread, whole wheat bread, or biscuit, cereals.

Vegetables.—Celery, lettuce, cresses, cucumbers, cabbage, spinach, string beans, green peas, mashed potatoes.

Desserts.—(All without sugar). Plain milk puddings, junket, rice and milk. Stewed fruits.

Liquids.—Pure water, hot or cold; toast water, buttermilk, milk, malted milk, weak tea (no sugar).

AVOID.—Champagne, sweet wines, malt liquors, cider, coffee, tobacco, dried fruits, nuts, cheese, sweets, pastry, pies, spices, rich puddings, fried dishes, vinegar, pickles, lemons, rhubarb, mushrooms, asparagus, sweet potatoes, tomatoes, gravies, patties, rich soup, eggs, lobster, salmon, crabs, mackerel, eel, veal, pork, goose, duck, turkey; salted, dried, potted or preserved fish or meat (except fat bacon).

ACUTE RHEUMATISM

Thompson*

Dietetic Treatment. While the fever lasts and other symptoms are acute, such as pain and swelling of the joints, the patient should be put upon a fluid diet. The majority of cases do best at this time with an exclusive milk or bread-and-milk diet. Those patients who cannot take milk, however, may be allowed soups and broths flavored with vegetable extracts, chicken tea, milk toast, barley or oatmeal gruel, clam broth.

Thirst is often a prominent symptom, especially if there be much fever, and it is advisable for the patient to drink fluid freely to assist in washing out the waste products from the body. Lemonade and slightly acid drinks of various kinds, such as dilute phosphoric acid or the effervescent mineral waters, are recommended. Boiled milk and Seltzer or Vichy may be drunk, or oatmeal or barley water flavored with lemon. Alcohol should be avoided while the acute symptoms last, unless the complication of inflammation of the endocardium or pericardium enfeeble the heart action, is prolonged and anæmia is considerable, alcohol may be given as a tonic two or three times a day in the form of a glass of claret or Burgundy (one to two ounces), or diluted whiskey.

During convalescence the appetite is not usually vigorous, and it is not necessary to urge the taking of much food at first. The diet should be principally farinaceous, but not saccharine.

Such articles may be given as rice (plain or spiced), arrowroot, oatmeal, cornmeal, semolina, wheaten grits, panada, milk toast, simple unsweetened puddings, wine jelly, blanc mange and malted foods.

The return to solid diet should be gradual, and for a long time the patient should abstain from eating meats as well as from pastry and sweets. Fagge states that no meat or fish should be allowed for at least a week after subsidence of the fever and acute symptoms, or, better, for a fortnight, and many believe that beef tea is harmful. Meat can undoubtedly induce a relapse.

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

When convalescence becomes established, eggs, fish, oysters, and white meat of broiled or roasted chickens may be given, and one or two such vegetables as asparagus, spinach, or stewed celery, with a baked apple or fresh fruit, but sweets and alcohol should long be withheld.

The patient should be fed often, having one or two extra lunches during the day, for anæmia is apt to prevail for some time, and abundant nutriment is required.

RHEUMATISM

Massachusetts General Hospital*

DIET.—Graham or brown bread, white bread limited (½ slice daily), corn, granum, rice, milk, eggs, flour, puddings, crackers, beans, peas, all kinds of vegetables (except potatoes and cooked tomatoes), rhubarb, fresh fish, butter, cheese, buttermilk, cream, alkaline waters, toast.

AVOID.—Red meats, starch or potatoes, white bread, sugars.

CHRONIC RHEUMATISM

DIET: *Soup.*—Beef tea, chicken and mutton broth in small quantities.

Fish.—Raw oysters or clams, white fleshed fresh fish—broiled or boiled.

Meat.—Sweetbreads, chicken, tripe, broiled fat bacon or boiled ham (all sparingly).

Farinaceous.—Boston brown bread, corn, whole wheat bread, cornstarch, rice, milk toast, dry toast, graham bread, granum, butter, crackers.

Vegetables.—All except potatoes and cooked tomatoes.

Desserts.—Plain puddings, rhubarb, junket (all without sugar).

Liquids.—Milk, cream, buttermilk, malted milk, alkaline waters, tea, cocoa (no sugar), pure water, plain or with lemon or lime (no sugar).

AVOID.—Red meats, pork, turkey, goose, duck, veal, fried fish, cooked oysters or clams, salted, dried, potted or preserved fish or meats (except ham and bacon). Lobsters, crabs, salmon, eggs, rich pies, made dishes, gravies, potatoes, tomatoes, asparagus, mushrooms, rich puddings, candies nuts, cheese, coffee, cider, malt liquors, wines.

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* Diet used at the Massachusetts General Hospital, Boston.

OBESITY

Contrary to what might be expected, fat eaten as food is not deposited in the body as fat. Part of it is utilized in tissue formation, while the rest is burnt. The fat of the body is the surplusage of Carbohydrates beyond body needs. Of course it is obvious that if the dietary be rich in fat, this will tend to maintain the body temperature, and thus the demand is lessened, and the more remains over for adipose tissue.

The treatment of obesity is the avoidance of carbohydrates. When a reduction in bulk has been achieved, persistence in the dietary is necessary in order to prevent increase in weight, and a regulated dietary must become the rule.

DIET: *Fish.*—All fresh white fish broiled or boiled.

Meats.—Lean mutton or lamb, beef, chicken, game (sparingly).

Eggs.—Cooked in all ways (not fried).

Farinaceous.—Dry toast or crusts, stale bread (sparingly).

Vegetables.—Lettuce, celery, spinach, cresses, asparagus, cauliflower, white cabbage, onions, tomatoes, radishes, olives.

Liquids.—Coffee or tea, one cup without milk, cream or sugar; pure water one glass, drank slowly *after the meal.*

AVOID.—Dark flesh fish, rich soups, salt fish, veal, pork, sausage, fats, potatoes, oatmeal, hominy, macaroni, spices, rice, carrots, beets, turnips, parsnips, puddings, pastry, pies, sugar, sweets, cakes, cream, milk, spirituous liquors, beers, sweet rums, champagne.

PHTHISIS

Fothergill *

Consumption is a disease where treatment is almost wholly dietetic. The children of a mother whose pedigree exhibits proof of a consumptive tendency, may with propriety be put to a healthy wet nurse immediately on birth, or fed on modified cow's milk upon the physician's directions.

In cases of consumption it is difficult to say that drugs are useless, but certainly those that come nearer to aliments have most evidence in their favor—as wine, cod-liver oil and the phosphates of lime. Their effect on the appetite must be sedulously watched, and the end must not be sacrificed to the means; that is to say, if they spoil the appetite, they must be left off. The reason for administering oil is to afford an easily assimilated basis of renewed organic growth to take the place of the tubercular matter. If anything prevents its easy assimilation, it is obviously useless. The use of climate in the treatment of phthisis may be tested by a dietetic action; if it improves the appetite it is doing good; if it injures the appetite it is doing harm.

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* J. M. Fothergill, M.D.: "A Manual of Dietetics," New York, William Wood & Co.

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DIET: *Soups.*—Turtle or oyster soup, mutton, clam or chicken broth, purée of barley, rice, peas, beans, cream of celery or tomatoes, whole beef tea, peptonised milk gruel.

Fish.—All kinds of fresh fish, boiled or broiled, oysters or clams, raw, roasted or broiled.

Meats.—Rare roast beef or mutton, lamb chops, ham, fat bacon, sweetbreads, poultry, game, tender steaks, hamburger steak rare.

Eggs.—Every way except fried.

Farinaceous.—Oatmeal, wheaten grits, mush, hominy, rice, whole wheat bread, corn bread, milk toast, biscuits, muffins, gems.

Vegetables.—Potatoes, baked, boiled or creamed, string beans, spinach, onions, asparagus, tomatoes, green peas, all well cooked, cresses, lettuce, alone or with oil dressing, celery.

Desserts.—Farina, sago, tapioca, apple or milk pudding, floating island, custards, baked or stewed apples with fresh cream, cooked fruits, rice with fresh cream.

Liquids.—Fresh milk, cool, warm, or peptonised, cocoa, chocolate, buttermilk, pure water, tea, coffee, panopepton.

AVOID.—Fried foods, salt fish, hashes, gravies, veal, pork, carrots, parsnips, cabbage, beets, turnips, cucumbers, macaroni, spaghetti, sweets, pies, pastry, sweet wines.

DEBILITY

DIET: *Soup.*—Whole beef tea, all the rich cream soups, chicken or beef broth containing the chopped meat. Any broth thickened with the grains.

Fish.—Raw oysters and all fresh fish broiled or boiled.

Meats.—Tender juicy steaks, hamburger steak, broiled bacon, lamb chops or cutlets, boiled ham, game, chicken, mutton, beef.

Eggs.—Raw, with sherry wine, coddled, poached, soft cooked, shirred, *Farinaceous.*—Brown bread, dry toast, milk and cream toast, corn bread, whole wheat bread, cakes, biscuits, rolls, vermicelli, macaroni, cereals, tapioca.

Vegetables.—All that are perfectly fresh and well cooked.

Desserts.—Calf's foot jelly, sweet fruits, marmalade, junkets, gelatin, fruit jams, baked apples, rice, tapioca and apple pudding, cornstarch pudding and custards.

Liquids.—Albuminous drinks, panopepton, cocoa, chocolate, milk hot or cold, pure water plain or aërated, malted milk, unfermented grape juice.

AVOID.—Pineapple, bananas, pastry, pies, vinegar, pickles, spices, squash, carrots, turnips, cucumbers, cabbage, salt meat (except bacon and ham), turkey, veal, pork, oysters or clams, hashes or stews.

DYSPEPSIA

Fothergill *

Dyspepsia in a limited sense means the abnormal condition of the stomach and duodenum, in which these organs, without being structurally diseased, are incapable of perfectly and easily digesting ordinary food.

The causes of simple dyspepsia or indigestion are numerous. Deficiency of nutriment, inferior or badly cooked food, and bad condition of the blood are the principal causes, also irregularity in the time of meals and excessive quantities of food and imperfect mastication.

What a dyspeptic should eat and drink depends upon the particular kind of indigestion from which he is suffering. A man of sedentary habits will probably suffer from intestinal trouble, and its first manifestation is constipation. The intestinal dyspeptic should eschew starchy foods, white flour, rice, potatoes, cheese, milk and hard-cooked eggs. He should substitute whole wheat or graham bread, cornmeal bread. Fruits should form a very large and important part of his dietary. Prunes, baked apples, brown bread and molasses, fresh meat, fish, meat broths and soft-cooked or poached eggs.

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* J. M. Fothergill, M.D.: "A Manual of Dietetics," New York, William Wood & Co.

The patient habituated to much physical activity must drink large quantities of pure water morning and evening and between meals, but not at meal time. Water not only absorbs the noxious poisons in our system, but it enables the kidneys to perform their function of throwing off uric acid, urea, which when not eliminated causes rheumatism, gout and bilious conditions.

There is a well known form of indigestion which is intractable to all medicines and regimen, except the avoidance of fluids; a dry dietary is a swift cure.

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DIET: *Soup.*—Oysters and thin, clear beef and mutton soup.

Fish.—Fresh mackerel, bass, perch, shad, cod, raw oysters.

Meats.—Game, sweetbreads, tender meats, chopped meats, broiled calf's head, tongue, tripe, lamb, chicken, mutton and beef.

Eggs.—Eggs raw, soft and hard cooked.

Farinaceous.—Graham bread, whole wheat bread, corn bread, stale bread, dry toast, crackers, tapioca, sago, cornstarch, rice, oats, hominy, cracked wheat.

Vegetables.—Asparagus, celery, cresses, lettuce, green peas, string beans, sweet corn, spinach.

Desserts.—*Ripe* fruit—raw or stewed; apple tapioca, apple snow, baked apples, custards, junkets, rice, tapioca, cornstarch, or bread puddings.

Liquids.—Panopepton on cracked ice, pure cold water, hot water and milk (equal parts), malted milk, weak tea and coffee, not more than one cup at a time and taken slowly after a meal; unfermented grape juice.

AVOID.—Ice water, spirituous liquors, nuts, cheese, ice cream, pastry, pies, candies, salmon, lobster, crabs, sausages, ducks, goose, salted, smoked or preserved fish; pickled, potted, corned or cured meats, kidney, liver, fried foods, gravies, potatoes, turkey, stews, hashes, pork, veal, rich soups, chowder.

CONSTIPATION AND DIARRHEA

In disorders of the alimentary canal the choice of food is scarcely less important than in affections of the stomach itself. The food is often alone sufficient to produce or relieve the two opposite conditions of constipation and diarrhea.

The tendency of rice and wheaten flour is to bind the bowels; that of oatmeal to open them. When the ordinary white wheaten bread locks up the bowels it is found in many cases that relief is at once afforded by resorting to unbolted, or whole wheat-bread, that is, bread containing the bran as well as the corn. Oatmeal and maize have the reputation of opening the bowels.

Fruit is also regarded as a laxative, and for many adults as well as children a fig, two or three prunes, or some stewed apples, are enough to correct the bowels when correction is required. Under certain circumstances fruit is a corrective of a loose state of the bowels.

At any time a quantity of apples (peel and all) will put a stop to biliary diarrhea. This use of fruit is almost unknown, but is worth bearing in mind. Milk boiled with rice (best ground) has a distinct corrective action; by such admixture too firm curdling is avoided. To put in a little cinnamon is to add a flavoring agent which at the same time is a good addition as acting favorably on loose bowels.

DIARRHEA

Massachusetts General Hospital *

DIET.—Stale bread, dry toast, crackers, butter, rice, soft cooked eggs, eggs and milk, flour and milk puddings, boiled and peptonised milk, tea, custards, blancmange, wine jelly, oatmeal, oysters, gruel, chicken.

AVOID.—Soups, animal broths, fresh bread, fruits, vegetables, fried dishes, fish, saccharine foods, salt meats, veal, lamb and pork.

CONSTIPATION

DIET: *Soup.*—Oyster soup, meat broths, panopepton bouillon.

Fish.—Raw oysters, fresh fish of all kinds broiled or boiled.

Meats.—Game, poultry, almost any fresh meats.

Farinaceous.—Rye bread, brown bread, graham, corn and whole wheat bread, hominy, mush cereals, oatmeal.

Vegetables.—Salads with oil, string beans, green peas, green corn, asparagus, potatoes, cauliflower, spinach, brussels sprouts, onions, boiled.

Desserts.—Apple puddings, fig puddings, plain pudding, junkets, hominy, raisins, cherries, huckleberries, (the blue seedless kind), grapes, melons, apples, oranges, pears, ripe peaches, baked apples, with cream, figs, stewed prunes.

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* Diet used at the Massachusetts General Hospital, Boston.

Liquid.—Unfermented grape juice, plenty of pure water, cold or hot; black coffee, cocoa, new cider, buttermilk, orange juice, malted milk.

AVOID.—Spirituous liquors, pineapple, cheese, nuts, tea, sweets, milk, pastry, puddings, rice, tapioca, new bread, eggs, liver, pork; salt, smoked, potted or preserved fish or meats.

ACUTE GASTRITIS

Einhorn *

During the first or second day of illness it is best not to give the patient anything substantial to eat. Strained barley or rice water, or weak tea may be taken. On the third day, as soon as the appetite reappears, the patient is permitted to partake of water soup (bread and hot water) oatmeal or barley gruel, rice soup, and perhaps one soft cooked egg. Later on French bread, butter and oysters may be added to the dietary.

If the improvement is steadily progressing the fourth day begin with meat once a day, and thus slowly return to the usual bill of fare.

CHRONIC GASTRITIS

Einhorn *

The regulation of the diet is of prime importance in the treatment. The dietary to be selected will depend on the severity of the symptoms.

At the beginning, therefore, a light diet will be called for. The patient should partake of four meals daily. The articles of food should be given largely in liquid and semi-liquid forms; that is, milk, kumyss, matzoon, barley, oatmeal, and rice soup prepared in milk; chicken soup with an egg beaten up in it; soft cooked eggs, mashed potatoes, scraped meat, raw, or boiled, toasted bread, and also French white bread (not too fresh); butter; tea and cocoa.

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* Max Einhorn, M.D.: "Disease of the Stomach," New York, William Wood & Co.

The quantity of nourishment for each meal should neither be excessively large nor too small.

My own bill of fare for the first week of the treatment is as follows:

Eight o'clock:	Calories.
Two eggs	160
" ounces of French white bread	156
One-half ounce of butter	107
One cup of tea (100 gm. of tea, .150 gm. milk)	101
Sugar 10 gm. (℥ iiss.)	40
Half past ten o'clock:	
Kumyss or matzoon or milk, 250 gm. (℥ viii.⅓)	168
Crackers, 30 gm. (one ounce)	107
Butter, 20 gm. (℥ v.)	163
Half past twelve o'clock:	
Two ounces of tenderloin steak, or of white meat of Chicken	76
Mashed potatoes, or thick rice, 100 gm. (℥ iii.⅓)	127
White bread, two ounces	153
Butter, one half ounce	107
One cup of cocoa, 200 gm. (℥ vi.⅔)	101
Half past three o'clock:	
The same as half past ten:	438
Half past six o'clock:	
Farina, hominy, or rice boiled in milk, one plateful, 250 gm. (℥ viii.⅓)	440
Two scrambled eggs	160
Bread, two ounces	156
Butter, one-half ounce	107
	2.863

The patient having been kept on this diet for a week or two, the diet must be gradually changed to one suitable for the lighter forms of chronic gastritis. Here the following rule will apply: The diet should correspond as nearly as possible to the common mode of living. In this way the distribution of the meals should be arranged according to the customs prevailing in those places in which the patient lives.

All food derived from the vegetable kingdom should be given in large portions, while the quantity of meat should be somewhat limited.

In order to permit the patient to have a greater variety in his food, it is best not to point out a few articles he should eat, but to mention only those he should avoid. Forbid meat with very tough fibres, meat from too old animals or too fresh meat (right after slaughtering), meat that contains too much fat, like pork; forbid sausages, lobster, salmon, chicken salad, mayonnaise, cucumbers, pickles, cabbage, strong alcoholic drinks like liquors.

It must be impressed upon the patient to masticate the food thoroughly, to eat slowly, not to think of business during meals, and to stop eating before the sensation of satiety appears. The latter advice is only necessary in persons who are accustomed to high living.

* * * * *

Chronic gastric catarrh is frequently combined with constipation. The diet can be arranged as to facilitate movement of the bowels. All foods which contain a large percentage of cellulose (undigested matter) increase the quantity of fæces, thereby effect a stronger peristalsis of the larger bowel.

All kind of green vegetables (spinach, asparagus, green peas) and rye bread are therefore very suitable. Many organic acids possess the property of increasing intestinal peristalsis. Almost all kinds of fruits contain a certain quantity of these organic acids, and act like mild aperients. The use of cooked pears, stewed or baked apples, stewed prunes, is in many instances effective. Ewald recommends a mixture of two parts of prunes to one part of dried figs. The taste is agreeable, and the cathartic action mild. The custom of eating an orange in the morning for its laxative effect is well known. To these dietary remedies we may also add the use of a glassful of either very cold or warm water, or a glass of milk in arising, in the fasting condition.

There are many persons in whom one of these latter means produces a good movement of the bowels.

ULCER OF THE STOMACH

Einhorn *

The diet consists of liquids—milk, milk with strained barley, or oatmeal, or rice water; plain water, weak tea and peptone (one teaspoon to a cup of water). Debove and Rémond have suggested the addition of lactose and of meat powder to the milk, in order to make the diet richer in nourishment substances.

As a rule, we employ the above named additions, which fulfil the same purpose, besides varying the monotonous bill of fare.

First week.—During the first week we give the patient half a cup (about 100–150 c.c.) of either, every hour. Everything the patient takes must be neither cold or very warm, and should be taken slowly (sipping, or with a spoon).

Second week.—During the second week we order the same kind of food, with this difference, that he is nourished every two hours, and gets a cupful or a cupful and a half (200 to 300 c.c.) at a time.

Occasionally we now allow the patient one raw egg beaten up in the milk, once or twice a day. In the beginning of the third week we feed the patient every three hours; he is allowed barley, farina, and rice (well cooked) in milk, soft-cooked eggs, crackers softened in milk, in addition to his previous foods; in the third day of the third week we begin to give the patient meat, first raw, well scraped, then broiled.

Thereafter we go over to the ordinary daily diet, excluding heavy salads, pastry, raw fruit and the like.

In the following table I give an outline of diet which I ordinarily prescribe in this affection:

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* Max Einhorn, M.D.: "Disease of the Stomach," New York, William Wood & Co.

OUTLINE OF DIET IN GASTRIC ULCER

First Three Days

		Number of Calories.
7 A. M.;	milk, 150 C.C. (five ounces)	101
8 "	" " " " "	101
9 "	" " " " "	101
10 "	milk and strained barley water, (āā, 150 C.C)	80
11 "	milk, 150 C.C	101
12 "	" "	101
1 P. M.:	bouillon either alone or with the addition of one to two teaspoonfuls of a peptone preparation, 150 C.C	30
2 "	milk	101
3 "	"	101
4 "	"	101
5 "	milk with strained barley or oatmeal	80
6, 7, 8, 9 P.M.:	milk, 150 C.C	404
		1.402

Fourth to the Tenth Day

		Number of Calories.
7 A. M.;	milk 300 C.C. (ten ounces)	202
9 "	" " " "	202
11 "	" with barley, rice, or oatmeal water, 300 C.C	160
1 P. M.:	one cup of bouillon, 200 C.C., and one egg beaten up in it	80
3 "	milk, 300 C.C	202
5 "	" "	202
7 "	" with barley water, 300 C.C	160
9 "	" 300 C.C	202
		1,410

Eleventh to the Fourteenth Day

		Number of Calories.
7 A.M.:	milk, 300 C.C	202
9 "	" "	202
	and two crackers softened (one ounce)	100
11 "	milk with barley water, 300 C.C	160
1 P. M.:	one cup of bouillon, 200 C.C., one egg, and two crackers	180
3 "	milk, 300 C.C., and one egg	282
5 "	" "	202
	and two crackers	100
7 "	milk, with barley water	160
9 "	milk, 300 C.C	202
		1.790

FOURTEENTH TO THE SEVENTEENTH DAY

		Number of Calories.
7 A. M.:	milk, 300 C.C.	202
9 "	" "	202
	and two crackers (one ounce)	100
11 "	milk with barley, 300 C.C.	342
1 P. M.:	scraped meat, 50 gm.	60
	two crackers, one cup of bouillon, 200 C.C.	100
3 "	milk, 300 C.C.	202
5 "	" "	202
	one egg (soft boiled).	80
	two crackers.	100
7 "	milk with farina, 300 C.C.	342
9 "	" 300 C.C.	202
		2.134

SEVENTEENTH TO TWENTY-FOURTH DAY

		Number of Calories.
7 A. M.:	two eggs (soft boiled).	160
	butter, 10 gm	81
	toasted bread, 50 gm.	130
	milk, 300 C.C.	202
10 "	" "	202
	crackers, 50 gm.	166
	butter, 20 gm.	162
1 P. M.:	lamb chops (broiled) 50 C.C.	60
	mashed potatoes, 50 gm.	44
	toasted bread, 50 gm.	130
	butter, 10 gm.; one cup of bouillon, 200 C.C.	81
4 "	the same as at 10 A.M.	530
6:30 "	milk with farina, 300 C.C.	342
	crackers, 50 gm.	166
	butter, 20 gm	162
9 "	milk, 300 C.C.	202
		2.820

* * * * * *

In cases of ulcer of the stomach presenting a more severe type—violent pains, frequent vomiting, inability to take food on account of the pains— or after hæmatemesis, I usually have the patient abstain from any food whatever, given by the mouth, for a period of five days. The patient is then fed by the rectum. This is done in the following way: early each morning the patient receives a large enema of about a quart of lukewarm water, in which a teaspoonful of common table-salt has been dissolved as a cleansing enema. About an hour after the patient has emptied the injected water, the first nourishing enema is given; this may consist either of a glassful of milk (about 200 c.c.), in which a raw egg has been well beaten and a pinch of salt added, or of a cupful of water in which a tablespoon of a good peptone preparation has been dissolved. The temperature of either must be about 100° F. Such a nourishing enema is given three or four times a day. The quantity of the feeding enema is 200–250 c.c., and it is slowly injected by means of a fountain syringe and a soft-rubber rectal tube. The patient may frequently wash his mouth with cold water, and is allowed from time to time to keep a small piece of chopped ice in his mouth, and to swallow the melted water. The five days being over, the mode of diet is the same as described above for the ordinary form of ulcer.

GASTRIC ULCER

Massachusetts General Hospital*

DIET.—Milk and lime water, egg albumin, eggs (very soft cooked), strained gruels, soft bread, milk toast, ice cream, jelly and rice.

DYSENTERY

Thompson †

During an attack of acute dysentery the patient should be kept absolutely quiet in bed, and should not be allowed to rise for the movement of the bowels, making use of a bed-pan instead. Throughout the active stage the diet must be strictly confined to easily digestible food, and in most cases it is wisest to give only predigested fluid articles. Peptonised or pancreatinised milk, or boiled milk, pressed-meat juice, whey, or raw egg albumin beaten with sherry and flavored with nutmeg are recommended. Many patients do best upon a diet of raw scraped beef or meat balls.

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* Diet used at the Massachusetts General Hospital, Boston.

† W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

In cases of acute dysentery, and especially in the amœbic form, the loss of strength, anæmia, and emaciation progress very rapidly, and the strength must be supported by stimulation, for which brandy is preferable to whiskey.

During convalescence the diet must be very cautiously increased, and confined to food which is promptly and completely digested, leaving but little residue. For this purpose animal food should be chiefly eaten, while fish, tender beefsteak, roast beef, boiled or broiled chicken, eggs, custard, blancmange, dry toast, junket, well boiled rice, or wine jelly, may be given. All fruits and vegetables must be forbidden, and butter and cream should be taken sparingly.

If the disease occurs in infancy, the child, if possible, should be fed at the breast. Otherwise all milk and water given should be Pasteurised. Beef tea and mutton broth may be allowed in moderation, and special care should be observed not to overfeed.

CHRONIC DYSENTERY

Thompson *

Chronic dysentery is often best treated by an exclusive milk diet of from two and a half to three quarts a day, with rest in bed or on the lounge. In other cases rare steak or roast beef or chicken and egg albumin may be allowed, with dry toast, zwieback, or crackers. The milk and meat diet may be advantageously combined.

In Osler's opinion, if there is much ulceration of the colon, meat is not well borne, and it is better to keep

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

the patient upon a diet which will give but little residue, such as boiled or peptonised milk.

The stools must be examined every day or two to ascertain the presence of undigested fragments of milk curds or meat, oil globules, mucus, blood, etc. If improvement does not occur, the patient may be put upon a diet of egg albumin with beef juice, or some of the preparations of beef meal or peptonoids, with pancreatinised milk. Return to solid diet must be very gradual, and may be conducted on the lines directed for convalescence from typhoid fever.

ENTERIC DIET

Dr. Vickery *

Milk, Mellins' Food, strained gruels, broths and strained soups, milk whey, buttermilk, slips, eggs (soft cooked or raw), milk flavored occasionally with tea or coffee, barley water, albumin water, beef juice.

SPECIAL ENTERIC DIET

Cutler †

Skimmed Milk	8 oz.		at 7 A.M.
Mellins' Food	8 "		" 9 "
Skimmed Milk	8 "		" 11 "
Eggs and Milk	8 "		" 1 P.M.
Beef juice	3 "	with	
Barley water	3 "		" 3 "
Skimmed Milk	6 "	with	
Tea	½ "		" 5 "
Chicken Broth	4 "	with	
Barley Water	3 "		" 7 "
Buttermilk	8 "		" 9 "
Skimmed Milk	8 "		" 11 "
Beef Tea	8 "		" 1 A.M.
Skimmed Milk	8 "		" 3 "
Albumin Water	8 "		" 5 "

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* Dr. Vickery: "Diet used at the Massachusetts General Hospital, Boston."

† Elbridge G. Cutler, M.D.: "Diet used at the Massachusetts General Hospital, Boston."

LIQUID ENTERIC DIET

Cutler[*]

Skimmed Milk	8 oz.	4 times every 24 hours.
" "	6 " with	
Tea or Coffee		2 " " "
Beef Tea	8 "	1 " " "
Chicken broth	3 " with	
Barley Water	3 "	1 " " "
Mellins' Food	8 "	1 " " "
Albumin Water	8 "	1 " " "
Beef juice	3 " with	
Barley Water	3 "	1 " " "
Buttermilk	8 "	1 " " "

One soft boiled egg daily if desired or raw in milk.

APPENDICITIS

Thompson[†]

Dietetic Treatment. The dietetic treatment of appendicitis, which has not yet passed into the surgeon's hands, should consist in giving only such foods as will be thoroughly absorbed, leaving as little residue as possible to irritate the lower bowel and excite peristalsis.

Until the outcome of the attack is decided it is best to put the patient upon a fluid diet, consisting chiefly of nutritive broths. Beaten eggs may be allowed, and a moderate quantity of pancreatinised milk, whey, or buttermilk. Cocoa may be given, and strained gruels of rice and barley.

In recurrent cases the patient should be cautioned to eat moderately and avoid all coarse or hard food, such as grits, coarse oatmeal, tough meats, fibrous vegetables, the skin of fruits or potatoes—in short, everything likely to overload the intestine with accumulated waste.

The operative cases should have the diet recommended after laparotomy. Usually the digestive organs require almost absolute rest for twenty-four hours after the operation, and hot water may be sipped. No food at all should be given for fully six hours before operation.

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[*] Elbridge G. Cutler, M.D.: "Diet used at the Massachusetts General Hospital, Boston."

[†] W. Gilman Thompson, M.D.: "Practical Dietetics." New York, D. Appleton & Co.

ACUTE BRIGHT'S DISEASE

In dieting a patient suffering from acute Bright's disease, one fact to be kept prominently in mind is the difficulty that the system has in getting rid of its waste material—especially of its nitrogenous waste. Another point is that the diet should be such as to assist in carrying off those inflammatory products by which we know that the tubules of the kidneys are to a greater or less extent blocked. The amount of nitrogenous elements in foods must be kept down, and aid must be given for washing out the products of inflammation from the uriniferous tubules.

Water is the best diuretic.

Hot water and hot diluent drinks.

Diluted milk is the food that answers best, and skimmed milk has a high reputation as a diuretic. Buttermilk, whey and kumyss are useful.

From two to three pints of milk, well diluted, given in the twenty-four hours, will in most cases be sufficient at first, but if the disease be protracted and tends to become chronic, a more liberal allowance of liquid food must be ordered, and broths may be added to the dietary. When milk alone is given it should be given in divided quantities at stated intervals—half a pint every three or four hours, diluted with half as much hot water or effervescing water.

Between supplies of milk drink freely of diluent drinks.

Diluent Drinks.—Plain water, toast water, barley water, cream of tartar and lemon drinks, and the acid drinks are all useful diluents.

Give between meals and drink *slowly*.

CHRONIC BRIGHT'S DISEASE

The kidneys are great agents in the work of excreting nitrogenous waste, and if these organs become clogged with accumulation of nitrogenous waste products they are not able to perform their functions.

As soon as we have evidence sufficient to prove that the kidneys are laboring and are burdened by their work, we must endeavor to remove the strain by regulating the diet; and one clear indication is to *limit* the supplies of nitrogenous foods.

Large amounts of animal food and the use of alcohol must be stopped, and better stopped altogether.

In many cases the effect of feeding the patient for six weeks, or even two or three months, upon an exclusive milk diet, is remarkably gratifying. The quantity of milk to be prescribed for an exclusive milk diet in Bright's disease must depend on the age and size of the patient, as well as upon his ability to take exercise and use up force in muscular energy. If the patient is invalided so as to be confined to his room or the house, from five to seven pints of milk daily are quite sufficient. If the patient loses weight on a milk diet, although it otherwise agrees with him, it may be well to add farinaceous food in the shape of rice or bread. In the worst cases it is desirable to give the milk at brief intervals, in quantities of six ounces, once an hour during the daytime, with an extra tumblerful at night, and on awakening in the morning.

The quantity of milk necessary to support life for any length of time and maintain good nutrition, especially if the patient is exercising at all, is considerable, and he must take from fourteen to eighteen, or even twenty-two six-ounce tumblerfuls of milk in the twenty-four hours.

It is usually impossible to commence at this rate without producing gastric disturbances from souring of the milk in the stomach, and possibly diarrhea. The latter symptom is an almost certain indication that the milk is being imperfectly digested, and a temporary reduction in its quantity is advised.

As the patient improves the milk diet may be given up, but it should never be too suddenly abandoned. In adopting any other diet it is a good rule never to let the nitrogenous food bear a greater proportion to the non-nitrogenous than one to four.

When, after a milk diet, the change is to be made to a more liberal *menu*, the hours of taking the milk may be reduced in frequency, and some of the milk may be replaced by the more hearty food.

DIET: *Soup.*—Vegetable or fish soup, broths with rice or barley.

Fish.—Raw oysters or clams, fresh fish broiled or boiled.

Meats.—Eat sparingly, chicken, game, fat bacon, fat ham.

Farinaceous.—Stale bread, whole wheat bread, toast, milk toast, biscuits, macaroni, rice, cereals of all kinds.

Vegetables.—Onion, cauliflower, mashed potatoes, mushrooms, lettuce, watercress, spinach, celery, cabbage.

Desserts.—Ripe raw fruits, stewed fruits, rice, tapioca, bread and milk puddings, junkets, cocoa.

Liquids.—Toast water, weak tea, pure water, peptonised milk, malted milk, fresh buttermilk, milk with hot water equal parts, whey, unfermented grape juice.

AVOID.—Fried fish, corned beef, hashes, stews, pork, veal, heavy bread, batter cakes, lamb, mutton, beef, gravies, beans, peas, malt or spirituous liquors, tobacco, coffee, ice cream, cake, pastry.

NEPHRITIC DIET

Massachusetts General Hospital*

Bread, soft puddings without eggs, all vegetables, except peas and beans, fruits of all kinds, gruels and broths.

AVOID.—Meat, eggs, peas, beans.

CONVULSIONS IN BRIGHT'S DISEASE

Convulsions in Bright's Disease.—In the course of Bright's disease convulsions and unconsciousness may occur. The course to adopt is to encourage the action of the skin, therefore place the patient in bed between warm blankets, pack hot water bottles around him, and send for medical assistance.—During this period the patient should live upon the exclusive milk diet.

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* Diet used at the Massachusetts General Hospital, Boston.

FUNCTIONAL DISORDERS OF THE LIVER (BILIOUSNESS)

DIET: *Soups.*—Light broths, vegetable soups, with crackers or a little toasted bread.

Fish.—Broiled or boiled fresh white flesh fish, raw oysters.

Meats.—Eat very sparingly of lean mutton, lamb, chicken or game.

Farinaceous.—Whole wheat bread, graham bread, dry toast, crackers, cereals, tapioca, arrowroot (well cooked).

Vegetables.—Mashed potatoes—almost all fresh vegetables (well cooked), plain salads of watercress, lettuce and dandelions.

Desserts.—Plain milk pudding of tapioca or cornstarch, junkets, stewed or fresh fruits, (all without sugar).

Liquids.—Weak tea or coffee (without sugar or cream), hot water, pure, plain or aërated water.

AVOID.—Articles of diet that are rich and highly seasoned as curries, pies and pastry, strong soups, foods rich in fats, salmon, herrings, eels, mackerel, and other fish of an oily nature, elaborate entrées, also rich sweets and creams, cheese, dried fruits and nuts, malt liquors, sweet wines, such as champagne, Madeira, brown sherry and port.

NERVOUS DISORDERS

Dietetic Treatment. The first thing to be done for a person suffering from nerve exhaustion is to adopt a dietary and a habit of life that will rebuild the nerve cells. The lost energy must be gently and slowly "coaxed" back—not through medicines, but through proper environments, proper employment and proper food. There is no disease that requires so little medicine as nerve exhaustion. The dietary should be simple and nutritious, abounding in lettuce, parsley and the fresh green edibles in season. If there is much intestinal disturbance, potatoes and foods that are rich in starch should be discarded. Active stimulants should be entirely eschewed. Take freely of unfermented grape juice and malted milk.

In functional nervous disease, such as hysteria and hypochondriasis, the appetite, muscular elasticity, and mental powers will often be observed to be deficient in the early part of the day, and to recover their tone in the evening. At this latter time, therefore, it is advisable to make the principal meal.

FOOD ENEMATA

Rectal feeding is frequently the only method that can be adopted by the surgeon, since it is hazardous to feed the patient by the mouth for some time after operrations upon the stomach and intestinal tract, gastric ulcer, pernicious vomiting, and like conditions.

In selecting foods for nutritive enemas it must be borne in mind that the mucus membrane of the lower portion of the intestinal canal has but little digestive power, and hence the nourishment must be presented in such a form that it can be easily absorbed and assimilated. It must be noted, also, that the mucus membrane of the lower bowel soon becomes irritable, unless the nutritive material is perfectly bland, and is also in such condensed state as to leave behind no residue to decompose and act as an irritant. The fluid should be at the temperature of the blood, and should be injected by means of a fountain syringe and a soft-rubber rectal tube.

Each time before giving a nourishing enema, a cleansing enema of 250 C.C. of lukewarm water should be administered, in order to thoroughly cleanse the large intestine and make it more fit for absorption.

Salt solution:

Sodium chloride..	ʒ i (one drachm)
Aquae	O i (one pint)

Stimulating Enemata:

Black Coffee	℥ iv (four ounces)
Whiskey	℥ ii (two ounces)

Nutrient Enemata:

Peptonised Milk	℥ iv to ℥ vi (four to six ounces)
Whites of two eggs.	

Above used Per Rectum every two to four hours.

Nutrient Enemata:

Milk	℥ i (one ounce)
German Seltzer H_2O	℥ iv (four ounces)

Used in Icterus, every two hours.

Nutrient Enemata—Malted Milk.

Dissolve from three to four heaping teaspoonfuls of Horlick's malted milk powder in one-half pint of water, to which add one-half teaspoonful of salt. Use at body temperature, or two or three degrees higher.

The white of one egg may be incorporated if desired.

Four to six ounces used per rectum every two to four hours.

HOSPITAL DIETARIES

"Half subtilized to Chyme—the liquid food readiest obeys the assimilating powers."

Liquid Foods:

Milk in different forms, malted milk, beef juice, beef tea, raw egg; acid, starchy and albuminous drinks.

Semi-liquid Foods:

Strained gruels; strained broths with cereals. Whey, junket, fruit soup.

Milk Diet: (Bellevue Hospital).*

During the day give 6 to 8 ounces every 2 hours.
During the night give 6 to 8 ounces every 3 hours.
(When very ill give every two hours during the night).

Soft Solids: (Massachusetts General Hospital).†

Soft toast, soft eggs, crackers in milk or broth, jellies of all kinds, ice cream, soft puddings without raisins, liquids of all kinds, soups strained, very weak tea, coffee, or cocoa.

Avoid.—Meat, potatoes, vegetables.

Liquid and *Farinaceous:* (Massachusetts General Hospital).

Cereals, bread, jellies, liquids, ice cream, custard, blancmange, puddings without raisins, chicken.

Nitrogenous Diet: (Massachusetts General Hospital).

Meat, fish, eggs (not fried), oysters, junket, custard, ice cream, string beans, soup and oatmeal; with crackers, fruit, butter and lettuce.

Nutrient Diet: (Elbridge G. Cutler, M.D.).‡

Two eggs strained through muslin into a tablespoon of cold water until dissolved.

Add this to 4 to 6 ozs. of cold milk, add ½ drachm salt, dissolved in water. If patient is very low add Tinct. opii (deodorized). At times beef juice, ½ drachm is added, but it is not necessary.

Rotch.

1. Leave good milk in ice water 6 hours; upper quarter is 10 per cent. cream.
2. Ordinary skimmed cream—76 per cent. fat.
3. M. G. H. cream is 20 per cent. fat.

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* Diet used at Bellevue Hospital, New York City.

† Diet used at the Massachusetts General Hospital, Boston.

‡ Elbridge G. Cutler, M.D.: Diet used at the Massachusetts General Hospital, Boston.

Extra Diet: (Massachusetts General Hospital).

Chicken, eggs, stale bread and toast, scraped beef, sandwiches, blancmange, soft custard without raisins, raw oysters, milk, broths, gruels, soups, milk whey, oranges, lemonade, crackers, jelly, ice cream, weak tea, coffee, or cocoa.

Fish Diet:

Consists of a ration of bread, ten ounces, and fish, eight ounces (the uncooked measure), such as haddock, cod, or sole or similar fish, potatoes eight ounces, cocoa one ounce, with half an ounce of sugar and a sixth of a pint of milk.

This is a serviceable form of diet for those for whom large quantities of meat are not only unnecessary but injurious.

Broth Diet:

In children's hospitals a diet is sometimes classified as the "broth diet," with mutton broth flavored with vegetables, and bread and butter, with milk; or a "beef tea diet," in which the beef tea replaces the broth; and in the lighter diet of children, gruels, bread and molasses, and simple articles of farinaceous foods such as farina, cornstarch, rice, etc., should play an important rôle. Sometimes such a diet goes under the name of "soft food."

Restricted Diet:

Breakfast.—Tea or coffee (with milk and sugar), farinaceous food (with milk), eggs.

Dinner.—Soup; either of the following: raw oysters, roast beef, steak, chicken with vegetables, pudding (bread, rice, tapioca, or cornstarch).

Supper.—Tea (with milk and sugar), bread (with butter), fruit (fresh or dried).

BELLEVUE HOSPITAL IN THE CITY OF NEW YORK

Dietary Table for Patients

MONDAY

Breakfast.—Coffee, with milk and sugar, bread and butter, oatmeal, crackers, milk (1 qt.).

Dinner.—Roast beef, rice, soup, potatoes, vegetables, bread.

Supper.—Tea (with milk and sugar), bread and butter, stewed apples.

TUESDAY

Breakfast.—Coffee (with milk and sugar), bread and butter, hominy, crackers, milk (1 qt.).

Dinner.—Mutton stew, potatoes, vegetables, bread, bread pudding.

Supper.—Tea (with milk and sugar), bread and butter, prunes.

WEDNESDAY

Breakfast.—Coffee (with milk and sugar), bread and butter, rice, crackers, milk (1 qt.).
Dinner.—Roast beef, barley soup, potatoes, bread.
Supper.—Tea (with milk and sugar), bread and butter, stewed prunes.

THURSDAY

Breakfast—Coffee (with milk and sugar), bread and butter, oatmeal, crackers, milk (1 qt.).
Dinner.—Beef stew, potatoes, vegetables, bread.
Supper.—Tea (with milk and sugar), bread and butter, stewed apricots.

FRIDAY

Breakfast.—Coffee (with milk and sugar), bread and butter, two eggs, crackers, milk (1 qt.).
Dinner.—Baked fish, potatoes, vegetables, bread, rice pudding.
Supper.—Tea (with milk and sugar), bread and butter, prunes.

SATURDAY

Breakfast.—Coffee (with milk and sugar), bread and butter, hominy, crackers, milk (1 qt.).
Dinner.—Mutton stew, potatoes, vegetables, bread.
Supper.—Tea (with milk and sugar), bread and butter, stewed prunes, apples.

SUNDAY

Breakfast.—Coffee,(with milk and sugar), bread and butter, crackers, milk (1 qt.), two eggs.
Dinner.—Corn beef, bean soup, potatoes, bread, cornstarch pudding.
Supper.—Tea (with milk and sugar), bread and butter, prunes.

MILK DIET

To be prescribed by the attending physician or surgeons.

ARTICLES OF SPECIAL DIET

Beefsteak, beef tea, chicken, chicken soup, rice and milk, eggs, milk.

DIETARY OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK 1904

HOUSE DIET

Breakfast.—Tea or coffee (milk and sugar). Bread and butter: White bread or Graham bread or corn bread or rolls or toast.

Porridge: Oatmeal or wheaten-grits or Indian meal or hominy or farina or samp. Meats: Hash or eggs or salt fish or fresh fish or stew.

Dinner.—Soup: Stock or mutton broth with barley or vegetable or chowder; dry bread. Meats: Beef (roast or boiled) or mutton (roast or boiled) or Corned beef or fresh fish or Irish stew. Vegetables: Potatoes baked boiled or mashed and tomatoes or baked beans or French beans or Turnips or beets or rice or macaroni or samp. Pudding: Rice or bread or tapioca or farina or cornstarch or custard.

Supper.—Tea (sugar and milk) bread and butter or toast and butter. Fruit: Apples stewed or baked or prunes or pears.

CONVALESCENT DIET

Breakfast.—Tea or coffee (milk and sugar). Bread and butter. White bread or Graham bread or corn bread or rolls or toast: Porridge: Hominy or farina. Meats: Eggs or fresh fish or stew (plain).

Dinner.—Soup: Stock or chicken or mutton broth with barley or vegetable. Dry bread. Meats: Beef (roast or boiled) or chicken or fish (fresh). Vegetables: Potatoes (baked) or rice or macaroni or samp. Pudding: Rice or bread or tapioca or farina or corn starch or custard.

Supper.—Tea (milk and sugar) Bread and milk or milk toast or bread and butter or toast and butter. Fruit: Apples stewed or baked or prunes or pears.

NITROGENOUS DIET

Breakfast.—Tea or coffee (milk), bread and butter, Graham bread. Meats: Eggs or fresh fish or stew *without* vegetables or meat hash *without* potatoes.

Dinner.—Soup: Stock or chowder, Graham bread. Meats: Beef (roast or boiled) or mutton (roast or boiled) or fresh fish or Irish stew. Vegetables: Spinach or lettuce or celery or string beans. Pudding: Custard.

Supper.—Tea (milk) Graham bread and butter or bread and milk eggs or cold meat.

FARINACEOUS DIET

Breakfast.—Tea or coffee (milk and sugar). Bread and butter: White bread or Graham bread or corn bread or rolls or toast. Porridge: Hominy or farina or Indian meal.

Dinner.—Soup: Vegetable or macaroni or barley broth; dry bread. Vegetables: Baked potatoes and tomatoes or French beans or rice or macaroni or samp. Pudding: Rice or bread or tapioca or farina or corn starch.

Supper.—Tea (milk and sugar) bread and milk or milk toast or hominy or boiled rice or farina. Fruit: Apples stewed or baked or prunes or pears.

MILK DIET

Breakfast.—One quart of milk.
Dinner.—One quart of milk
Supper.—One quart of milk

EXTRAS

ORDERED ONLY BY THE ATTENDING PHYSICIAN OR SURGEON

Mutton chops, beef steak, scraped beef, beef tea (made with Hydrochloric acid), chicken (broiled, fricasseed or roast), chicken broth, eggs, milk, oysters, clam broth, gruels, crackers, ginger bread, custard, milk toast.

DIET IN PREGNANCY

Thompson *

It is not customary to adopt any definite system of diet for pregnancy unless complications arise. If serious vomiting occurs in the early months, this should be treated in the manner described in following article. If albuminuria is discovered, meat and other nitrogenous food must be restricted, in accordance with the directions given for albuminuria. If the patient becomes very anæmic, without albuminuria, meat, eggs, and milk should be eaten in abundance.

The "longing" of pregnant women for various indigestible articles, such as pickles, chalk, etc., are largely mythical, and occur, if at all, only as an accompaniment of a general hysterical condition, not as a peculiarity of the period of pregnancy. Pregnant women, however, should live simply and avoid foods which are likely to produce dyspepsia, heartburn, and colic, such as sweets, pastry, fried food, rich sauces, spiced dishes, and heating drinks.

They often suffer from constipation, in which case fruits and coarse cereals, such as oatmeal or wheaten grits, may be of service. The stomach, especially at night, should not be overloaded. The idea formerly prevalent that pregnant women need to eat food containing abundant phosphates and lime salts, to furnish the embryo with material for making bones, as a hen eats lime to make egg shells, is no longer accepted. The salts in question are sufficiently contained in an ordinary mixed diet, such as any pregnant woman may eat, if plainly cooked.

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

Another theory, equally ingenious and directly opposed to the one above mentioned, is only interesting historically, for efforts to aid Nature in a process which she is abundantly competent to regulate unaided are now regarded as futile. This theory was that the agonies of labor would be less severe if the pregnant woman lived upon a diet of fruits and meats, avoiding bread and fresh vegetables during gestation, on the ground that the lime salts which they contain would favor early ossification of the infant's bones, and thus make the labor proportionately difficult.

It will be observed that the first theory favors the child, and the second the mother, but practically it has been found that diet has little or no influence either way, so long as it is digestible, nourishing and sufficient to keep the mother in good general condition.

VOMITING—SEASICKNESS—VOMITING OF PREGNANCY

Thompson *

The first principle in the dietetic treatment of vomiting from any cause is to give the stomach rest. If it has been overloaded with a large bulk of food, or with indigestible material, it is well to encourage emesis, and distressing retching may be overcome by taking large draughts of lukewarm water. A quart or two will rinse out the stomach and allay irritation to a marked degree.

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

Well nourished patients when serious vomiting first occurs should usually refrain from taking food of any kind for from ten or twelve or even twenty-four hours. Exceptions to this rule are sometimes found in that type of seasickness, and sometimes in the vomiting of pregnancy, in which, as soon almost as the stomach is emptied, there is a desire to replenish the loss.

In any case in which the gastric irritation is persistent, it is necessary to give fluid food, and only in small oft-repeated doses, preferably in predigested form. The food is best given cold, as a rule, although some persons can relieve nausea by sipping very hot water.

A teaspoon of prepared milk, or in extreme cases but a few drops, given with a medicine dropper once in ten or fifteen minutes, may be all that the stomach will at first tolerate.

The following is a list of dietetic substances which are commonly prescribed for the relief of nausea and vomiting, or for nourishment while those conditions exist: Cracked ice; pancreatinised milk; milk with sodium bicarbonate (ten grains), and cerium oxalate (five grains); milk and lime water; milk and Vichy, soda, seltzer, or carbonic-acid water; kumyss and zoolak; beef extracts and peptonoids, such as Johnson's Fluid Beef, and Carnrick's Beef Peptonoids, somatose, Valentine's or Liebig's meat juice; raw meat pulp, scraped; strong black coffee; sour lemonade or lemonade and Vichy; clam broth. Dry crackers, dry toast, and ginger snaps will sometimes be retained in seasickness, or a cracker buttered and sprinkled with a little Cayenne pepper; brandy and soda; iced dry champagne; iced brandy diluted with water, soda water, or Apollinaris.

Very severe and protracted cases may require lavage or nutrient enemata. Vomiting after abdominal surgical operations is often controlled by lavage.

ALBUMINURIA

Thompson *

Dietetic Treatment. The frequent return of functional albuminuria should be regarded as an indication of special weakness of the kidneys in the same way that frequent glycosuria invites suspicion of the strength of the digestive power of the liver, and it demands a careful regulation of the diet. Meat should be reduced in quantity, or temporarily forbidden, as well as all forms of alcoholic drinks, or other substances liable to produce renal irritation, and the diet should consist chiefly of fruits, vegetables, and milk. Careful attention must be paid to increasing the activity of the bowels.

When functional albuminuria is observed in children and adolescents, it is not necessary, nor is it advisable in ordinary cases, to wholly exclude nitrogenous food, but it should be restricted, especially in regard to eating butcher's meat and eggs, and the evening meal should be made very simple, consisting of food such as bread, crackers, rice or porridge, and milk.

DIET FOR THE MOTHER AFTER LABOR

Society of the Lying-In Hospital, New York City †

Immediately after labor in a normal case milk diet is given for the first six hours; at the end of that time regular diet.

In abnormal cases the diet is ordered by the physician.

In our regular diet stewed fruits and cereals are given very frequently; no veal or pork is allowed.

In cases of severe engorgement of breasts, fluids are restricted; a dry diet is given, which consists of the

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

† Diet used at the Society of the Lying-In Hospital, New York City.

regular diet and one glass of milk with each meal; no tea or coffee and no fluid between meals.

In cases of eclampsia milk is always given; also a large quantity of water, either hot or cold, and cream of tartar drink.

All nursing women have extra quantities of milk.

DIET OF A NURSING MOTHER OR WET NURSE

Thompson *

The diet of the nursing mother or wet nurse must be regulated to prevent noxious substances from passing into the breast milk, and to keep her in good health, so that she does not suffer from constipation, indigestion, or anæmia. Her weight should not alter, and if she has menstruated once or twice the milk changes and may disagree.

If milk does not make her constipated or bilious, she may drink it abundantly. She may take gruels and meat broths, and she should eat simple nourishing food, meat, eggs, vegetables, and fruits. The latter, even if sour, do not react unfavorably upon the child, provided the mother's digestion is good, and they serve to keep the child's bowels active. The mother should forego the drinking of much tea and coffee. Beer and wine also should not be drunk unless they are especially prescribed as a tonic. Wet nurses often demand beer, ale, or porter with their meals if they have been accustomed to it; but the popular idea that such beverages are especially beneficial is fallacious. Malt liquor sometimes causes the secretion of more milk, because more fluid is drunk, but the milk is no better for it. A reasonable quantity of fluids should be drunk, however, or the secretion of milk will suffer. The fluid may be in the form of plain or effervescing water, milk, soups, etc.

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

The mother or wet nurse should avoid all fatigue, worry, and emotional excitement of any kind, which may inhibit her digestive functions, and should take daily outdoor exercise.

On the whole, the best indication for the dietetic treatment of the wet nurse is the study of the condition of the child's digestion, bowels, and nutrition. A too meagre diet for the nurse is soon evident in lack of nutrition and development of the infant.

Drugs in Human Milk.—Not many drugs pass unchanged into the milk which are likely to poison the child through its food, but there are some which should be carefully avoided on this account. Such are belladonna, opium, morphine, and other alkaloids; iodine and its preparations; mercury and its salts; salicylic acid.

When, for any reason, it becomes necessary to discontinue the nursing and to stop further secretion of milk, the diet should at once be made as dry as possible, and a minimum quantity only of fluid is allowed.

DIET IN INFANCY

No food has yet been found so suitable for the young of all animals as their mother's milk. Experience shows that the best mode of administering food to the young is also that which is most widely adopted throughout warm-blooded nature, namely, in a fresh, tepid, liquid state, and in small quantities at a time. (For "one nursing" the child should not be kept at the breast more than twenty minutes.)

Milk may be said to be still alive as it leaves the breast fresh and warm, and quickly becomes living blood in the infant's veins. A very slight chemical change is requisite. Its frequent administration is demanded by the rapid absorption.

The physician supervises and explains to the mother fully the facts as to the proper hours for feeding, and the amount of food required, and also gives them some idea of the size of the infant's stomach.

Table of capacities of infant stomach:

1. Premature, 8 months	8	Cubic	Centimetres.
2. Infant 5 days old	25–30	“	“
3. Infant 4 weeks old	75	“	“
4. Infant 8 “ “	96	“	“
5. Infant 16 “ “	107	“	“
6. Infant 20 “ “	108	“	“

—Rotch

As a rule, infants are overfed, and it is advisable to show the mother or nurse an empty bottle representing the capacity of the infant's stomach in order to impress upon her the danger of overloading it.

The wholesome nutriment for the first six months is milk alone. To give judicious diet a fair chance, the frame must be well protected from cold, and just in proportion as the normal temperature of the body is maintained, so does growth prosper.

ARTIFICIAL FEEDING OF INFANTS

“An attempt has been made, especially in France, to rear infants on ass's milk, which has a composition identical with that of woman's milk. The experiment has, however, failed. To-day cow's milk is universally utilized in substitute feeding. Before cow's milk can be made suitable for this purpose it must be modified—that is to say, the relative proportion of the casein, fat, and water must be changed.”—Koplik.*

Composition—Cow's milk.	Reaction slightly acid.	
Water	86 to 87	per cent.
Fat	4	“
Milk sugar	4.5	“
Mineral matter	.7	“
Proteids	4	“
Caslinogen	2.88	“
Lactalbumin	.53	“

—König

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* Henry Koplik, M.D.: “The Diseases of Infancy and Childhood.” New York: Lea Bros.

Composition—Human milk.	Reaction slightly alkaline.	
Water	87 to 88	per cent.
Fat	3 “ 4	“
Milk sugar (lactose)	6 “ 7	“
Mineral matter	.1 “ .2	“
Proteids	1 “ 2	“
Caseinogen	.59	“
Lactalbumin	1.23	“
	König	

NUMBER OF NURSINGS DAILY, WITH THE NECESSARY QUANTITY OF EACH FEEDING, IN ARTIFICIALLY-FED INFANTS

Koplik *

If we now attempt to apply the knowledge acquired in the study of the feeding of breast-fed infants to the artificially fed infant, we meet with the following obstacles: Cow's milk taken in the same quantities is not so completely used up by the economy as breast milk. There is much more waste, as has been shown by Knœpfelmacher and Camerer.

This waste is chiefly caused by the failure to consume the casein and fat. The stools also of the bottle-fed infant are more numerous and of greater total bulk than is the case with the breast-fed infant.

Knœpfelmacher has shown that the waste in the gut of phosphorus in cow's milk is sixteen times as great as the waste of that element in breast milk. In view of the lack of definite knowledge in these points, the quantity of modified cow's milk given at each feeding are still determined by experience alone. We have, it is true, been aided in this work by the study of the absolute quantity of proteids and fats necessary to the maintenance of nutrition.

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* Henry Koplik, M.D.: "The Diseases of Infancy and Childhood." New York, Lea Bros.

Table showing the Number of Feedings and Quantities of Modified Milk to be given to Artifically Fed Infants.—(Koplik.)

AGE.	NUMBER OF FEEDINGS DAILY.	QUANTITY AT EACH FEEDING.		TOTAL TO BE GIVEN IN 24 HOURS.	
		C.C.	Oz.	C.C.	Oz.
First day	3	10		30	1
Second day	8	20		160	5½
Third day	8	30	1	240	8
Fourth day	8	40		320	10⅔
Seventh day	8	50		400	13½
Second week	8	60	2	480	16
Fourth week to first month	8	60	2	480	16
Two months	7 or 8	90	3	720–630	21–24
Three months	7	120	4	840	28
Four months	7	150	5	1050	35
Five months	6 or 7	180	6	1080–1260	36–42
Six months	6	210	7	1260	42
Seven and eight months	6	240	8	1440	48
Nine months	6	250	8½	1500	50

The increase in the amount of milk from the seventh to the ninth is not so apparent, since at this period we, as a rule, begin to feed cereals in addition to the milk.

COMPOSITION OF THE FOOD

Koplik *

With the healthy infant there is little need of frequent changes of formulas. There are certain rules which must be strictly adhered to in order that the infant be not upset at the beginning:

The total amount of proteid in the cow's milk mix-

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* Henry Koplik, M.D.: "The Diseases of Infancy and Childhood," New York, Lea Bros,

tures must be very low for the newly born infant, certainly not exceeding 0.5 per cent. during the first week. After this time the proteids are increased to 1 per cent., and kept at this point until the third month, when they are increased to about 1.5 per cent., and kept there until the ninth month. In vigorous infants of heavy weight we may increase the proteids at the sixth month to 2 per cent., but I have never found it necessary to go beyond this limit.

Fats.—The fats in the first few days after birth should be low in amount (2–2.5 per cent.). After the second week to the third month, I have always given about 3 to 3.5 per cent. of fat.

The reason for this is that during this period we find that the infant does not increase in weight as it should unless the fats are high. After the third month the fats may be reduced to 2 or 2.5 per cent. with most infants.

This proportion is continued until the ninth month without change. Unless there is some special indication, I would construct the following percentage formulæ for normal infants:

AGE.	PROTEIDS.	FATS.	SUGAR.
One to seven days	0.50	2.00	6.00
One week to three months......	1.00	3.50	6.00
Three months to six months .	1.20	2.50	6.00
	or 1.50	2.50	6.00
Six months to nine months ..	1.70	2.50	6.00
	or 2.00	2.50	6.00

SCHEDULE FOR FEEDING AN AVERAGE CHILD IN HEALTH FOR THE FIRST YEAR

Holt *

AGE.	Number of meals.	Interval by day between meals.	Night feedings, 10 P.M. to 6 A.M.	Quantity for each meal.	Quantity for 24 hours.
1 week	10	2 hours.	2	1 oz.	10 oz.
2 to 3 weeks .	10	2 "	2	1½ "	15 "
4 weeks......	9	2 "	1	2¼ "	20 "
6 "	8	2½ "	1	3 "	24 "
3 months ...	7	3 "	1	4 "	28 "
5 " ...	6	3 "	..	5½ "	33 "
6 " ...	6	3 "	..	6 "	36 "
9 " ...	5	3 "	..	7½ "	37½ "
12 " ...	5	3 "	..	8 "	40 "

NOTE.—A large child may be given a few ounces more in the 24 hours than the quantity above specified, a small child a little less. A large child may pass from one formula to the next a little more rapidly than at the time specified, but a small child, or one with feeble digestion, will have to proceed more slowly. The hours for feeding should in all cases be observed with regularity.

* L. Emmet Holt, M.D.: "The Care and Feeding of Children." New York, D. Appleton & Co.

DR. LOUIS STARR'S TABLE OF THE INGREDIENTS, HOURS, AND INTERVALS OF FEEDING, AND TOTAL QUANTITY OF FOOD FROM BIRTH TO THE END OF THE SEVENTH MONTH

Age.	Cream.	Whey.	Milk.	Water.	Milk Sugar.	Salt.	A non-starchy infant's food.	Hours of feeding.	Intervals of feeding.	Total quantity.	Remarks.
During 1st week...	f ʒ ij.	f ʒ iij.	....	f ʒ iij.	Gr. xx.	......	....	5 A.M. to 11 P.M.; occasionally once or twice at night.	2 hours.	f ℥ xij.	Water must be hot.
From 2d to 6th week.	f ʒ ij.	.....	f ℥ ss.	f ℥ j.	Gr. xx.	A pinch.	....	5 A.M. to 11 P.M.	2 hours.	f ℥ xvij.	
From 6th week to end of 2d month.	f ℥ ss.	.....	f ʒ x.	f ʒ x.	ʒ ss.	A pinch.	....	5 A.M. to 11 P.M.	2 hours.	f ℥ xxx.	
From 3d month to 6th month.	f ℥ ss.	.....	f ℥ ijss.	f ℥ j.	ʒ j.	A pinch.	....	5 A.M. to 10.30 P.M.	2½ hours.	f ℥ xxxij.	
During the 6th month:											
morning and midday	f ℥ ss.	.....	f ℥ ivss.	f ℥ j.	......	......	.... ʒ j.	7 A.M. to 10 P.M.	3 hours.	f ℥ xxxvj.	Water must be hot to dissolve food.
Other bottle	f ℥ ss.	.....	f ℥ ivss.	f ℥ j.	ʒ j.	......	....				
During 7th month.	Same.	.....	Same.	Same.	Same.	......	ʒ ij.	Same.	Same.	Same.	Same.
From 8th to end of 9th month.	f ℥ ss.	.....	f ℥ vjss.	f ℥ j.	ʒ j at 7 A.M. and 10 P.M. only.	......	ʒ j at 10.30 A.M., and 2 and 6 P.M. only.	7, 10.30 A.M., and 2, 6, 10 P.M.	3½ and 4 hours.	f ℥ xl.	
For 10th and 11th months.	f ℥ ss.	.....	f ℥ viijss.	f ℥ j.	......	......	℥ ss. of a Liebig food or barley jelly ʒ ij, at 7 A.M. and 6 P.M. only.	Same.	Same.	....	Second meal 10.30 A.M., and fifth meal 10 P.M., a breakfastcupful of warm milk, ℥ viij. Third meal 2 P.M., yolk of egg, lightly boiled with stale bread crumbs; or beef tea, ℥ vj, on alternate days.

SCHEME FOR FEEDING BABIES

Society of the Lying-In Hospital, New York City*

First Day.—Give from nursing bottles 30 C.C. (1 ounce) of 6 per cent. sugar water every 3 hours, from 6.45 P.M. to 9.45 P.M., inclusive, and if necessary one bottle at 3.45 A.M.

Second Day.—30 to 45 C.C. (1 ounce to 1½ ounce) of Formula No. 1 in nursing bottle, every 2 hours from 6.45 A.M. to 10.45 P.M., and 3.45 A.M.—ten feedings.

Third Day.—Same as second day.

Fourth Day.—If there is milk in mother's breast, nurse every 2 hours as on second day. If there is no milk in mother's breast, 30 to 45 C.C. (1 ounce to 1½ ounce) of Formula No. II every 2 hours, as on second day.

Fifth and Sixth Day.—For breast fed babies ten feedings as in second day. For bottle fed babies same as fourth day.

Seventh to Fourteenth Days.—For breast fed babies ten feedings. For bottle fed babies 30 to 75 C.C. (1 ounce to 2½ ounces) of Formula No. III for ten feedings.

Formulæ

Sugar Solution 6 *per cent.:*

Take 30 grams (1 ounce) sugar of milk and dissolve in 500 C.C. (1 pint) boiled water.

FORMULA No. I.

Fat, 0.5 *per cent.; sugar,* 6 *per cent.; proteid,* 0.5 *per cent.:*

Take 6 per cent. sugar solution, 7 parts.

Plain milk 1 part, 60 C.C. (2 ounces) lime water for every 500 C.C. (1 pint) of food mixture.

FORMULA No. II.

Fat, 1 *per cent. sugar,* 6 *per cent.; proteid,* 0.5 *per cent.:*

Take 6 per cent. sugar solution, 7 parts; 12 per cent. cream ½ part; milk ½ part.

60 C.C. (2 ounces) lime water for every 500 C.C. (1 pint) of food mixture.

FORMULA No. III.

Fat, 1.5 *per cent.; sugar* 6 *per cent.; proteid* 0.5 *per cent.:*

Take 6 per cent. sugar solution, 7 parts; 12 per cent. cream 1 part. 60 C.C. (2 ounces) lime water for every 500 C.C. (1 pint) of food mixture.

FORMULA No. IV.

Fat 2 *per cent.; sugar* 6 *per cent.; proteid* 0.6 *per cent.:*

Take 6 per cent. sugar solution, 5 parts; 12 per cent. cream 1 part.

60 C.C. (2 ounces) lime water for every 500 C.C. (1 pint) of food mixture.

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* Diet used at the Society of the Lying-In Hospital, New York City.

FORMULA No. V.

Fat 2.5 *per cent.; sugar* 6 *per cent.; proteid* 0.8 *per cent.:*

Take 6 per cent. sugar solution, 4 parts; 12 per cent. cream 1 part.

60 C.C. (2 ounces) lime water for every 500 C.C. (1 pint) of food mixture.

Notes

1. For every 500 C.C. (1 pint) of food mixture add 60 C.C. (2 ounces) of lime water.
2. 12 per cent. cream is the top fifth of a bottle of milk after standing about 5 hours.
3. It is the top 200 C.C. (7 ounces) of 1,000 C.C. (1 quart) of milk after standing about 5 hours.
4. If the milk is of rich quality the top 240 C.C. (8 ounces) can be taken.
5. Up to two weeks the amount of each feeding is 30 C.C. (1 ounce) to 75 C.C. (2½ ounces) according to weight, digestion and capacity.

From two to five weeks the amount of each feeding is 60 C.C. (2 ounces) to 100 C.C. (3½ ounces).

Number of daily feedings 10. From 6.45 A.M. to 10.45 P.M. From 10.45 P.M. to 6.45 A.M., one feeding should suffice.

FOR INFANT FEEDING USE PEPTOGENIC MILK POWDER which, by a physiological process, makes the casein of cows' milk soluble and digestible like the albuminoids of mothers' milk, and gives a food for infants which is practically identical with the food that Nature provides under favorable conditions.

How to Prepare Milk with Peptogenic Milk Powder for the Average Healthy Infant

One-half pint of pure cold water,
One measure* of Peptogenic Milk Powder,
One-half pint of fresh cold milk,
Four tablespoonfuls of sweet, fresh cream.

First dissolve the Powder in the water by rubbing and stirring with a spoon, then add the milk and cream; mix well, heat in a clean saucepan with constant stirring until blood-warm—not too hot to be agreeably borne by the mouth; keep at about this temperature for ten minutes; then bring quickly to boiling point;

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* The metal cap of the bottle is the measure.

pour at once into a clean bottle, shake thoroughly, cork tightly, and place directly on ice, or in a very cold place.

When a feeding is required, pour out the portion and warm it to the proper temperature, lukewarm; always shake the bottle thoroughly before and after pouring out a feeding.

A sufficient quantity of the food to last twenty-four (24) hours may be prepared at one time. It will remain perfectly sweet and good for this length of time, if kept chilled.

OTHER FOOD USED IN INFANT FEEDING

Barley Water; Barley Gruel; Barley Jelly; Wheat Jelly; Oat Jelly; Beef Juice; Albumin Water; Acorn Cocoa. Recipes for same find under their several headings.

The Nursing Bottle.—The bottles must be cleaned with antiseptics. The tube bottles should never, under any consideration, be used. No matter how carefully these tubes and outfits are washed, small particles of milk will remain in the tiny crevices and cause inflammation of the intestines.

Select the plain graduated bottle, with little neck, a wide mouth, and not much shoulder at the neck, so that it may be easily cleaned. These requirements are met by the Walker Gordon bottle.

When filled, the bottles are corked with non-absorbent cotton. They are corked loosely, so that the steam may escape. Before feeding, the bottle of milk is warmed to 105° F. (40.5° C.), so that the milk may not chill the stomach of the infant, and thereby suspend digestive processes. After the nursing, the bottle should be carefully rinsed with cold water, then bottle and nipple washed with a suds of Ivory soap and water. Rinse, boil in clear borax water for twenty minutes (nipples as well as bottle), and set away in a porcelain dish filled with boric acid solution, one teaspoonful to a quart of water, or they may be emptied and filled with a plug of sterilized baked absorbent cotton, and will remain sterile until ready to use.

Thirst.—Water should be given if infant shows signs of thirst. Given in nursery bottle, or the nipple may be fitted over a two-ounce bottle.

Thrush is a disease of the mouth common in bottle-fed or delicate children. Small whitish patches sometimes crowded thickly together, form over the lining of the mouth, and especially on the tongue. Wash the mouth carefully after every feeding, and be extremely cautious in cleansing the milk bottles and nipples. Cover the end of a toothpick with a bit of absorbent cotton, and wipe away the patches very gently. Then spray the mouth with a lotion made of one-half ounce of boric acid and one pint of sterile water. Or a small quantity of this lotion can be applied with a camel's hair brush. Borax, twenty grains; tincture of myrrh, one-half fluid dram; glycerine, one fluid dram; water (sterile), enough to make one fluid ounce.

FEEDING OF BREAST-FED INFANTS AND OF BOTTLE-FED INFANTS AFTER THE SIXTH MONTH

Koplik *

Camerer has shown that the secretion of the breast-milk reaches its highest limit in quantity and quality in the sixth month of lactation. In many cases it then diminishes in quantity and quality. If the infant gains steadily after the sixth month, nothing additional is given. If, however, the increase of weight is not satisfactory, we may at this period begin the daily additional administration of one or two bottles of modified cows' milk up to the ninth month, the time when the baby is weaned. On the eruption of the incisor teeth, the baby, generally at the seventh month, is allowed a cereal in the shape of some prepared barley or cracker or rusk (zwieback) to nibble upon once a day. The barley is omitted if the infants are inclined to be constipated. I find the one rusk (zwieback) or cracker daily is sufficient. As to cereals, the same procedure is followed with the bottle-fed infant after the teeth have appeared, or after the seventh or eighteenth month.

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* Henry Koplik, M.D.: "The Diseases of Infancy and Childhood." New York, Lea Bros.

FEEDING FROM THE NINTH TO THE TWELFTH MONTH

Koplik *

Breast-fed Infants.— Weaning.—It is not advisable to wean infants at the outset of the summer season, even though they must be kept at the breast a few months longer. The infant must not be wholly deprived of the breast in the warm season. If the bottle milk disagrees with the baby, it will go very hard with it should weaning have been accomplished at the outset of the summer. It takes about eight weeks to wean a baby completely. If the baby has had the benefit of one or two additional bottles daily from the sixth month, the process is comparatively simple. If, however, the infant has been kept on the breast exclusively until the ninth month, weaning is often very difficult. The infant will not take the bottle so long as there is a breast at its disposal. The only way out of the difficulty is to dispose of the nurse, and thus force the infant to take the bottle. This requires much moral courage on the part of the physician. In those cases in which the mother nurses the baby we cannot always gain her co-operation in denying the breast to the infant. The difficulties of weaning in such cases will be great. In weaning, I give those modifications of cows' milk which contain from 1 to 1.2 per cent. of proteids, and from 2 to 2.5 per cent. of fats, until the infant is fully weaned. I then increase the strength of the milk to that given to the bottle-fed baby at the ninth month. The bottle-fed baby at this time is given almost pure milk. It is well to mix the milk with a small quantity of water (1 ounce of water to 7 ounces of milk). In addition, from the ninth to the twelfth month, both breast-fed and bottle-fed infants are given cereals in shape of pap, barley, or granum, or rusk (zwieback), or crackers twice daily. Some mothers give these infants an ounce of expressed beef-juice, with barley once a day. Infants relish the change.

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* Henry Koplik, M.D.: "The Diseases of Infancy and Childhood." New York, Lea Bros.

GENERAL RULES FOR FEEDING YOUNG CHILDREN

Thompson *

1.—Allow time for meals.

2.—See that the food is thoroughly masticated.

3.—Do not allow nibbling between meals.

4.—Do not tempt the child with the sight of rich and indigestible food.

5.—Do not force the child to eat against its will, but examine the mouth, which may be sore from erupting teeth; and examine the food, which may not be properly cooked or flavored. If good food is refused from peevishness merely, remove it and do not offer it again before the next time.

6.—In acute illness reduce and dilute the food at once.

DIETARIES FOR YOUNG CHILDREN

Starr †

Diet from the twelfth to the eighteenth month:

7 A.M., stale bread soaked in a breakfast cup of new milk.

10 A.M., milk, six ounces, and soda biscuit, or a thin slice of buttered bread.

2 P.M., beef tea, six ounces, bread, and a tablespoonful of rice and milk pudding.

6 P.M., same as first meal.

10 P.M., a tablespoonful of Mellins' Food in eight ounces of milk.

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* W. Gilman Thompson, M.D.: "Practical Dietetics," New York, D. Appleton & Co.

† Louis Starr, M.D.: "Hygiene of the Nursery," Philadelphia, Blakiston.

In alternation, a lightly boiled egg with bread crumbs and six ounces of milk may be given at 7 A.M., and at 2 P.M. a mashed baked potato, moistened with four tablespoonfuls of beef tea, two tablespoonfuls of junket.

Diet from the eighteenth to the thirtieth month:

7 A.M., new milk, eight ounces; the yolk of an egg lightly boiled; two thin slices of bread and butter, or else milk, and two tablespoonfuls of well-cooked oatmeal or wheaten grits, with sugar and cream.

11 A.M., milk, six ounces, with a soda biscuit or bread and butter.

2 P.M., one tablespoonful of rare mutton pounded to a paste, bread and butter, or mashed potatoes moistened with good dish gravy, a saucer of junket; or else a breakfast cupful of beef tea or mutton or chicken broth, a thin slice of stale bread, a saucer of rice and milk pudding,

6.30 P.M., a breakfast cupful of milk with bread and butter, or soft milk toast.

Diet from two and a half to three and a half years of age; children who have cut their milk teeth:

7 A.M., one or two tumblers of milk, a saucer of thoroughly cooked oatmeal or wheaten grits, a slice of bread and butter.

11 A.M. (if hungry), a tumbler of milk or a tea cupful of beef tea with a biscuit.

2 P.M., a slice of underdone roast beef or mutton, or a bit of roast chicken or turkey, minced as fine as possible, a mashed baked potato moistened with dish gravy, a slice of bread and butter, a saucer of junket or rice and milk pudding.

7 P.M., a tumbler of milk and a slice or two of soft milk toast.

Diet from three and a half years up:

Breakfast.—Every day: milk, porridge and cream, bread and butter.

One dish only each day: Fresh fish, eggs lightly boiled, poached, eggs scrambled, eggs (plain omelet), chicken hash, stewed kidney, stewed liver.

Sound fruit may be allowed before and after the meal, according to taste, as oranges without pulp, grapes (seeds not to be swallowed), peaches, thoroughly ripe pears, and cantaloupes.

Dinner.—Every day: Clear soup, meat roasted or broiled and cut into small pieces, bread and butter.

Two dishes each day: Potatoes baked, potatoes mashed, spinach, stewed celery, cauliflower, hominy, macaroni (plain), peas, string beans (young), green corn (grated).

Junket, rice and milk or other light puddings, and occasionally ice cream, may be allowed for dessert.

Supper.—Every day: Milk, with toast or bread and butter, stewed fruit.

From the third to the fifth year the child has twenty teeth, and often three meals a day suffice, although from the third to the fourth year four may be given. After three years of age it is not possible to lay down definite rules for the quantity of food allowed. In health the appetite may be taken as a fair guide, and the child will not eat too much if taught to eat very slowly, and thoroughly chew each mouthful.

When the second set of teeth begin to replace the deciduous or milk teeth, which gradually decay, digestion is sometimes interfered with temporarily, from lack of ability to masticate thoroughly, and food should be subdivided before it is offered to the child.

APPENDIX

PRACTICAL SUGGESTIONS FOR THE NURSE IN THE SICK-ROOM

It is very important that a sick-room should be comfortable, cheerful and as plainly furnished as possible. At the very start a nurse should do away with all draperies, rugs and upholstered furniture. In any case of long illness it should be possible to keep a room exquisitely clean with very little confusion. It's a good idea to vary the position of the furniture occasionally, and in every way to prevent any dreariness in the effect.

A room should be perfectly ventilated, but absolutely free from drafts. This is easily accomplished by using tall screens in front of the windows. Have the room as light as the patient desires. Let in all the sunshine that is possible. Have a pot of growing flowers or ferns in the window, and every day or two a single fresh flower on a stand by the bed.

A nurse should never talk about sick people to the patient, and should never permit anyone who calls to do so. She should have tact enough to know when to keep the patient quiet, and when to allow a visitor, and melancholy visitors should be kept away.

A good nurse talks with the physician out of the patient's hearing. No whispering should be allowed in the sick room, no squeaking shoes, and no gossip or worrying conversation.

The Bath.—Beside the regular morning bath, it is a great comfort to the patient to have the hands and face frequently bathed. With the morning bath, when the patient first wakes up, the hair should be neatly combed, the teeth brushed, and the mouth rinsed; following this, the bed should be made daintily neat and changed with fresh linen as often as possible.

The bath in the sick-room not only contributes to the comfort of the patient, but also hastens recovery, as it stimulates the circulation and keeps the pores open.

Great care should be taken in bathing the sick person, not to suddenly chill the skin, have the water as nearly as possible the temperature of the body.

Nothing is more irritating to a nervous patient than a bath in hard water. It leaves the skin rough and sticky, and also is unhealthful as it clogs the pores. Where it is impossible to get rain water for an invalid bath, water can easily be made soft by putting a pinch of pure borax or boric acid in every basin of water. To get any real good from using borax you must make sure that it is pure. And all nurses who find it so invaluable in the sick-room, prefer the 20 Mule Team Brand, which is guaranteed to be without soda.

In giving a bath to a very sick person, it is essential to give it, as it were, in installments, as to expose very much of the body at once is likely to check perspiration and bring on a chill.

In case of diarrhea, dysentery, etc., where the skin becomes hard and dry, the relief to be derived from a quick, tepid, borax bath is beyond calculation. It is important that the skin should be speedily dried with a warm towel. Where there is any possible danger from such a bath, rub the patient briskly with alcohol.

Disinfectants.—So many diseases nowadays are caused by microbes that the importance of disinfectants in the sick-room cannot be over-estimated. The only possible way to prevent the spread of such diseases as consumption, cholera, yellow fever, typhoid, diphtheria, small pox, measles, scarlet fever, etc., is a constant, unlimited use of effective disinfectants.

In order to destroy these microbes, a nurse must make sure that her disinfectants have been well tested and are capable of doing their work. An excellent preparation which nurses are finding more and more useful in all sick-rooms is Sulpho-Napthol. In order to really accomplish their purposes, disinfectants must be used thoroughly, especially where they are expected to render powerless the microbes of excreta and expectorations, Sulpho-Napthol may be used not only as a general room-disinfectant, but most efficaciously in the bath of the attendant as well as the patient.

In contagious diseases a sick-room should be repeatedly washed with some disinfectant solution; also the walls, if they are painted, the furniture and the floors. It is the only way to protect the rest of the family.

Disinfecting Utensils.—All dishes or utensils used in the sick-room should be disinfected before being sent to the kitchen to be washed. A simple method is to scrape them clean and dip them in a basin of borax water. A teaspoonful of borax in a shallow bowl of water.

Clothing and Bedding.—The clothing and bedding of a patient in acute or contagious diseases should be changed frequently and, if not fresh every day, should, at least, be thoroughly aired. It is well to keep two sets of bed-linen in use so that what has been aired one day can be put on fresh the next day. It is important that aired bedding should be thoroughly warmed before being used again. To make bedding hygienically clean, wash it regularly in borax water.

The Temperature of the Room.—In very hot weather the temperature of the room can be lowered by keeping a shallow portable bath-tub filled with water, place it on two chairs near a window where the air will blow over it. The water in the tub should be changed two or three times a day. Or a curtain of cheese cloth hung in the window and kept wet will freshen the air.

Keeping Ice in the Sick-Room.—Of course the very best plan is to have a small refrigerator or a Japanese ice-box which could be had for a few dollars; but if these little luxuries are impossible, put the ice in a deep bowl, cover it with a plate, and put the bowl between two feather pillows. As feathers are a poor conductor of heat, naturally the heat as well as the air is kept out. Another simple way of keeping ice is to put it in a dish-pan, cover with a tin lid, and wrap in flannel cloths and newspapers.

Poultices.—Make poultices large in the first place, so that they will retain the heat as long as possible, apply as hot as can be borne by the patient, and renew the minute they begin to cool. They will retain the heat much better if the mixing bowl is placed over boiling water, and are covered with oiled silk or thin rubber when applied. Poultices may be made of Indian meal, bread, starch, ground slippery elm, charcoal and flaxseed.

A *flaxseed poultice* is made by putting the requisite amount of seed in a clean bowl, adding boiling water slowly, and stirring constantly until it is the right thickness. Spread half an inch deep between two layers of muslin. Fold the two edges of muslin to keep the poultice from running out.

A *bread poultice* is made by filling a muslin bag with bread crumbs, dipping it in a pan of boiling water, and squeezing it until it does not drip.

For a *charcoal poultice,* you mix powdered charcoal with flaxseed, Indian meal or bread. This poultice is useful in foul and sloughing sores.

Plasters.—As plasters are generally used for counter-irritants, their strength should be adapted to the tenderness of the skin and the amount of irritation it is necessary to produce. Pure mustard is very irritating, and quickly blisters tender skin, so it is usually diluted with flour; half flour and one-half mustard makes as strong a plaster as an average skin can endure, and where only a mild irritation is required, one-fourth mustard is quite sufficient.

To make a *mustard plaster*, where a moderate irritation is required, take one teaspoonful of Stickney & Poor's mustard flour, and add to it three teaspoonfuls of wheat flour, mix together thoroughly with sufficient water to make a pliable mass. Spread a quarter of an inch thick on a piece of old muslin, cover with cotton gauze, and fold the edges. Remove when the skin becomes red.

A *spice plaster* is made by mixing equal parts of Stickney & Poor's ground ginger, cloves, cinnamon, all-spice, and one-fourth part of Cayenne pepper. Put the whole in a small flannel bag, and when it is to be used, wet it with hot whiskey or alcohol.

Dry Heat Applications.—Put bran, hops, or camomile flowers into a thick flannel bag, heat the bag in an oven or in a tin plate on the top of the stove, hold in place, if necessary, by bandages. Always keep two bags going so that there is no chance of a chill with the re-heating of the bag.

Cold Water Dressings—Wet with cold water a piece of old linen or muslin large enough to cover the affected parts. Keep constantly cool, wringing it anew every few minutes, and be careful that the water does not drip on the patient.

Hot Water Dressings.—Hot water dressings are used in the same way as the cold water dressings, except that while the hot water is on the patient it is covered with oilcloth or thin rubber.

Applications of Hot Water with Spirits.—Fold old muslin the shape and size required, dip it into very hot water and wring dry. Have ready some common whiskey well heated (and care must be taken that the whiskey does not catch fire), dip the flannel in it, squeeze partly dry, apply as hot as it can be borne, and cover with a piece of dry heated flannel. As soon as the moist flannel dries, it should be dipped again in hot whiskey.

Application of Turpentine.—Dip a piece of old flannel in hot water and wring dry. Sprinkle it with a few drops of turpentine. Apply and cover with oiled silk, remove as soon as the skin begins to redden, as turpentine burns very quickly and disastrously.

TABLE OF EQUIVALENTS

Appended is a table of all the denominations of weights and measures, opposite which are placed the metric system, with corresponding equivalents in wine measure and avoirdupois weights :

LIQUIDS.	APPROXIMATE EQUIVALENT.	EXACT EQUIVALENT.
1 minim	0.06 Cubic centimetre	0.061 Cc.
1 fl. drachm	4 Cc.	3.696 Cc.
1 fl. oz.	30 Cc.	29.574 Cc.
4 fl. ozs. or ¼ pint	118 Cc. (⅛ Liter)	118.295 Cc.
8 fl. ozs. or ½ pint	236 Cc. (¼ Liter)	236.590 Cc.
16 fl. ozs. or 1 pint	473 Cc. (½ Liter)	473.197 Cc.
2 pints	1 Liter (1000 Cc.)	.946 Liter.
4 pints or ½ gallon	2 Liters.	1.892 Liters.
1 gallon	4 Liters.	3.785 Liters.
1 Cubic centimeter	16 minims.	16.23 mins.
4 Cc.	1 fluidrachm.	1.082 fl. drs.
15 Cc.	½ fl. oz. (4 fl. drs.)	4.057 fl. drs.
25 Cc.	6¾ fl. drs.	6.762 fl. drs.
30 Cc.	1 fl. oz.	1.014 fl. ozs.
60 Cc.	2 fl. ozs.	2.029 fl. ozs.
100 Cc.	3⅓ fl. ozs.	3.381 fl. ozs.
120 Cc.	4 fl. ozs. (¼ pint)	4.057 fl. ozs.
125 Cc.	4¼ fl. ozs.	4.227 fl. ozs.
235 Cc.	8 fl. ozs. (½ pint)	7.945 fl. ozs.
250 Cc.	8½ fl. ozs.	8.453 fl. ozs.
300 Cc.	10 fl. ozs.	10.144 fl. ozs.
470 Cc.	1 pint.	15.892 fl. ozs.
500 Cc.	1 pint 1 fl. oz.	1.056 pints.
950 Cc.	2 pints.	2.007 pints.
1000 Cc. (1 Liter)	2 1-10 pints.	2.113 pints.
4 Liters	1 gallon.	1.056 gals.

SOLIDS.	APPROXIMATE EQUIVALENT.	EXACT EQUIVALENT.
1-500 grain	0.00013 Gm.	0.000129 Gm.
1-150 gr.	0.00043 Gm.	0.000432 Gm.
1-120 gr.	0.00054 Gm.	0.000540 Gm.
1-100 gr.	0.00065 Gm.	0.000648 Gm.
1-64 gr.	0.001 Gm. (1 milligramme.)	0.001013 Gm.
1-50 gr.	0.0013 Gm.	0.001296 Gm.
1-40 gr.	0.0016 Gm.	0.001620 Gm.
1-32 gr.	0.002 Gm.	0.002025 Gm.
1-25 gr.	0.0026 Gm.	0.002592 Gm.
1-10 gr.	0.0065 Gm.	0.006479 Gm.
1-3 gr.	0.021 Gm..	0.021599 Gm.
1 gr.	0.065 Gm.	0.064798 Gm.
5 grs.	0.3 Gm. (3 decigrammes.)	0.324 Gm.
15 grs.	1 Gm.	0.972 Gm.
30 grs.	2 Gm.	1.944 Gm.
60 grs.	4 Gm.	3.888 Gm.
⅛ oz	3.5 Gm.	3.544 Gm.
½ oz	14.2 Gm.	14.175 Gm.
1 oz.	28 Gm.	28.350 Gm.
2 ozs	56 Gm.	56.699 Gm.
¼ lb.	113 Gm.	113.398 Gm.
½ lb.	225 Gm.	226.796 Gm.
1 lb.	450 Gm.	453.592 Gm.
2 lbs.	900 Gm.	907.185 Gm.
1 milligramme (0.001 Gm.)	1-65 grain.	0.015 grain.
10 milligrammes (0.01 Gm.) (=1 centigramme.)	1-6 gr.	0.154 gr.
100 milligrammes (0.1 Gm.) (=1 decigramme.)	1½ grs.	1.543 grs.
1 Gramme.	15½ grs.	15.4324 grs.
4 Gm.	60 grs. (1 dr. Troy)	61.729 grs.
10 Gm. (1 dekagramme).	⅓ oz.	154.324 grs.
25 Gm.	⅞ oz.	385.81 grs.
28 Gm.	1 oz. (437½ grs.)	432.107 grs.
56 Gm.	2 ozs.	1 oz. 426.7 grs.
100 Gm. (1 hektogramme).	3½ ozs.	3 ozs. 230.7 grs.

SOLIDS.	APPROXIMATE EQUIVALENT.	EXACT EQUIVALENT.
113 Gm.	4 ozs. (¼ lb.)	3 ozs. 431.3 grs.
200 Gm.	7 ozs.	7 ozs. 24 grs.
225 Gm.	8 ozs. (½ lb.)	7 ozs. 410 grs.
250 Gm.	8 4-5 ozs.	8 ozs. 358 grs.
450 Gm.	1 lb. (7000 grs.)	15 ozs. 382 grs.
500 Gm.	1 1-10 lbs.	1 lb. 1 oz. 279 grs.
900 Gm.	2 lbs.	1 lb. 15 ozs. 327 grs.
1000 Gm. (1 kilogramme or Kilo)	2 1–5 lbs.	2 lbs. 3 ozs. 120 grs.

CALORIES

The term calories is a technical term used to designate a certain amount of heat. It is sometimes called a heat unit, and really means the amount of heat required to raise one gram (15.5 grains) of water through a temperature of one degree centigrade (1⅘° Fah.). The fuel value of foods is expressed in calories determined by the calorimeter, and is usually higher than when burned in the body. It is sufficiently accurate for the purpose of comparison, and when computed on the following basis, is substantially correct.

Protein	5.900	calories	per	grain.
Fibre	4.200	"	"	"
Fat	9.300	"	"	"
Carbohydrates	4.200	"	"	"

To illustrate, we will take Gum Gluten:

Protein	54.38%	x 59	equals	3208.42	calories.
Fibre	.47%	x 42	"	19.74	"
Fat	.76%	x 93	"	70.68	"
Carbohydrates	34.04%	x 42	"	1429.68	"
Moisture	9.45%	x 0			
Ash	.90%	x 0			
Total				4728.52	"

TABLE FOR PREPARING PERCENTAGE SOLUTIONS

Public Charities and the Department of Bellevue and Allied Hospitals *

One fluid ounce of water, or 480 minims, weighs 456.4 grains. One pint of water, or 7680 minims, weighs 7300, or practically 7300 grains. Hence, a 10 per cent. solution, for instance, is one which contains 73 grains of some substance in 1 pint.

The following table will show at a glance the quantity of any substance, *by weight*, required to prepare *one pint* of a solution:

1. *To Prepare One Pint of a Solution*

REQUIRED TO CONTAIN OF A CERTAIN SUBSTANCE.		TAKE OF THE SUBSTANCE THE BELOW STATED AMOUNT IN GRAINS WITH ENOUGH WATER TO MAKE 1 PINT.		
PER CENT.	OR			
1/100 per cent.	1 in 10,000	Grains	0.73	(¾)
1/50 "	1 in 5,000	"	1.46	(1½)
1/40 "	1 in 4,000	"	1.83	(1¾)
1/30 "	1 in 3,000	"	2.44	(2½)
1/25 "	1 in 2,500	"	2.92	(3)
1/20 "	1 in 2,000	"	3.65	(3¾)
1/15 "	1 in 1,500	"	4.87	(4¾)
1/10 "	1 in 1,000	"	7.30	(7¼)
1/5 "	1 in 500	"	14.60	(14½)
1/4 "	1 in 400	"	18.25	(18¼)
1/3 "	1 in 300	"	24.33	(24¼)
1/2 "	1 in 200	"	36.50	(36½)
1 "	1 in 100	"	73.00	(73)
1½ "	1 in 75	"	97.33	(97)
2 "	1 in 50	"	146.00	(146)
2½ "	1 in 40	"	182.50	(180)
3 "	1 in 33⅓	"	219.22	(220)
4 "	1 in 25	"	292.00	(290)
5 "	1 in 20	"	365.00	(365)
10 "	1 in 10	"	730.00	(730)
20 "	1 in 5	"	1460.00	(1460)
25 "	1 in 4	"	1825.00	(1825)
50 "	1 in 2	"	3650.00	(3650)

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* Arranged by the Public Charities and the Department of Bellevue and Allied Hospitals.

2. *To Prepare One Fluid Ounce of a Solution.*

REQUIRED TO CONTAIN OF A SUBSTANCE.	TAKE OF THE SUBSTANCE.		
		APPROX.	
0.1 per cent	0.46 grain	(½ gr.).	And enough water to make 1 fluid ounce.
0.5 "	2.28 "	(2¼ ")	
1 "	4.56 "	(4½ ")	
2 "	9.13 "	(9 ")	
3 "	13.69 "	(13½ ")	
4 "	18.26 "	(18¼ ")	
5 "	22.82 "	(23 ")	
6 "	27.38 "	(27½ ")	
7 "	31.95 "	(32 ")	
8 "	36.51 "	(36½ ")	
9 "	41.08 "	(41 ")	
10 "	45.64 "	(45½ ")	

TABLE OF APOTHECARIES' OR WINE MEASURE

Gallon Congius.		Pint Octarius.		Fluidounce Fluiduncia.		Fluidrachm Fluidrachma.		Minim Minimum.
C.		O		f℥		fʒ		♏
1	=	8	=	128	=	1024	=	61440

TABLE OF TROY OR APOTHECARIES' WEIGHT

Pound Libra.		Ounce Uncia.		Drachm Drachma.		Scruple Scrupulum.		Grain Granum.
1	=	℥	=	ʒ	=	℈	=	gr.
		12	=	96	=	288	=	5760
		1	=	8	=	24	=	486
				1	=	3	=	60
						1	=	20

FAHRENHEIT—CENTIGRADE

To convert *Fahrenheit* degrees into those of *Centigrade*—subtract 32, divide by 9, and multiply by 5.

To convert *Centigrade* degrees into those of *Fahrenheit*—divide by 5, multiply by 9 and add 32.

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NOTE.—THE INDEX IS CLASSIFIED ACCORDING TO MAIN AND SUB-HEADINGS AS FOUND IN THE CONTENTS.

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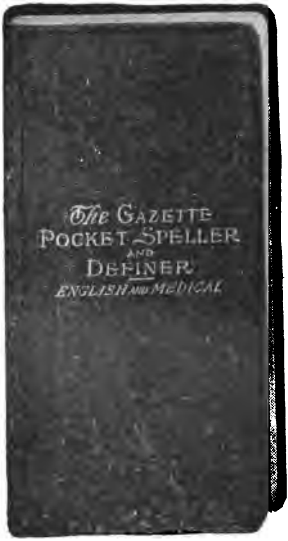

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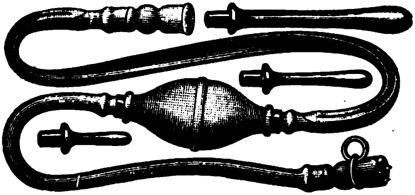

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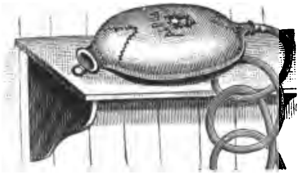

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